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Published monthly in English, Malayalam, Tamil & Kannada

Vol. XV FEBRUARY 1983 No.2

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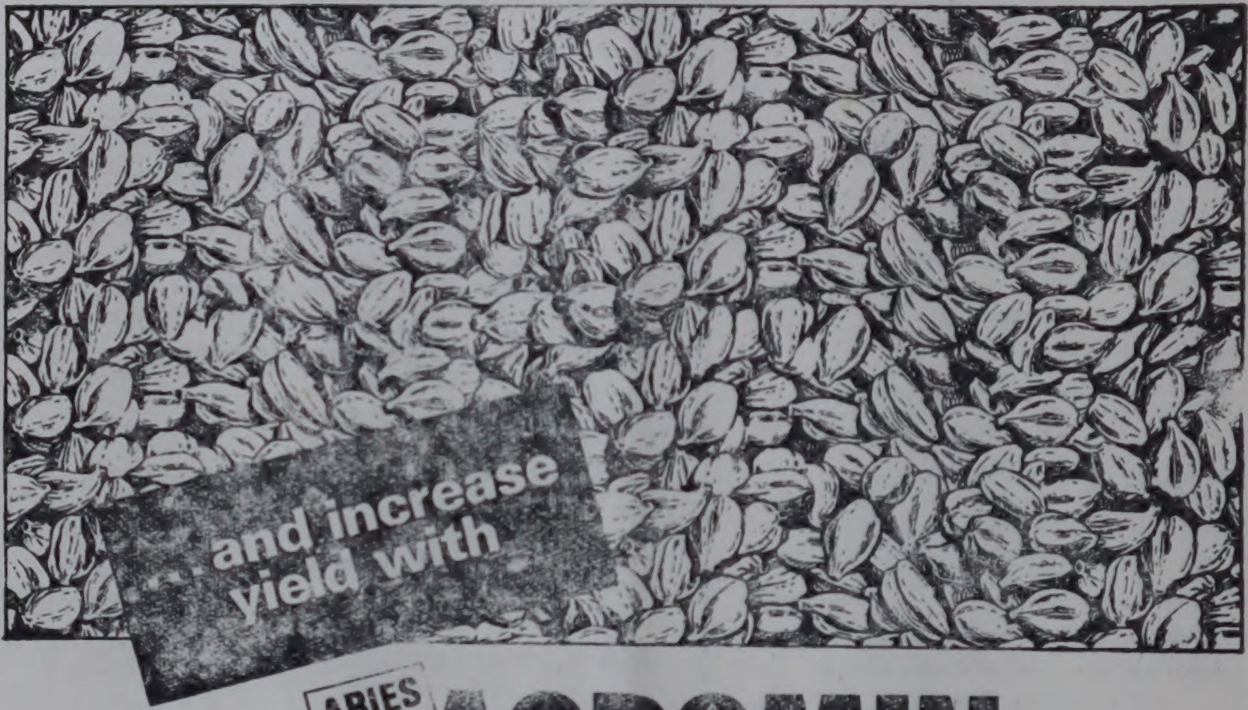

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Shri K. G. Nayar, Secretary, Cardamom Board explaining about cardamom plant to a distinguished Arab visitor at the Board's pavilion in the Saudi Food '83 Exhibition held at Riyadh, Saudi Arabia during February '83.

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Shri C Venketaraman, Additional Secretary, Ministry of Commerce Govt of India (extreme left) is seen here with Mr K Mohanachandran, Chairman Cardamom Board, Mr K S Skaria Jr. Vice-Chairman Cardamom Board and Mr B Shivaram, Secretary UPASI at the meeting held at MPEDA Cochin recently.

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Mr. K. Mohanachandran IAS, Chairman, Cardamom Board (fifth from right) is seen addressing the 43rd meeting of the Board held on 24th May 1983 at the Coffee Board Conference Hall, Bangalore. The other members (from left to right) are Mr. K. G. Nayar, Secretary, Cardamom Board; Mr. B. M. S. Negi, Under Secretary, Ministry of Commerce; Mrs Aruna Makkan, Director (Finance) Ministry of Commerce; Mr. K. S. Skaria Jr., Vice - Chairman, Cardamom Board; Mr. Vijayaraghavan, M. P. (seated next to Chairman); Mr. Xavier Arakkal, M. P. and Mr. Sheikh Abdul Kader, Board Member.

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ERRATA

The addresses given under "Overseas Trade Enquiries" in page 11-12 are not trade enquiries but addresses of Trade Promotion Offices abroad. The error is regretted.

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Smt. Ram Dulari Sinha, Union Minister of State for Commerce looks delighted at a model of cardamom plant. The Minister was on a three-day visit to Cochin recently.

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(PLANT PROTECTION - ENTOMOLOGY, MICROBIOLOGY NEMATOLOGY, PLANT PATHOLOGY AND RODENTOLOGY)

OOTTACAMUND (INDIA), JUNE, 1979

555 pp. Price Rs. 75-00 (US $ 25) September, 1981

Contains six sections, one each on nematology and microbiology and two each on entomology and plant pathology. The plantation crops dealt with are areca, cacao, cardamom, cashew, coconut, coffee, pepper, rubber and tea Full text of 72 papers on various aspects together with an abstract, is printed and after the papers in each session the main points emerging in the discussions and future lines of work are summarised.

Available from :

The Secretary
Indian Society for Plantation Crops
Central Plantation Crops Research Institute
Kasaragod 670 124, Kerala, India

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A journal devoted to the promotion of
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Published monthly in English, Malayalam, Tamil & Kannada

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Shri V. P. Singh (right), Union Minister for Commerce, visited Cardamom Board's pavilion at the UPASI Exhibition Coonoor. He is seen here along with the Board's representatives and Shri B. Sivaram (extreme left), Secretary, UPASI.

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Shri. K. Mohanachandran IAS, Chairman, Cardamom Board inaugurating Cardamom Curing House constructed by Nettithozhu Unit of Malanadu Development Society under the financial aid of Cardamom Board and Indo-German Social Service Society at Nettithozhu.

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People's Democratic Republic of Yemen

An Introduction to trade, tariffs and regulations

Introduction

People's Democratic Republic of Yemen occupies the south-east corner of the Arabian Peninsula, with the Yemen Arab Republic to its west, Saudi Arabia to its north and Oman to its north-east. The population of PDRY was estimated at about 1·8 million in 1979 and there are in addition large numbers of South Yemanis working in other Arab countries. Aden, the capital, has a population of about 3,00,000 and mukalla (50,000), a port halfway up the coast is the only other sizeable town. Aden serves as the main commercial port for trade.

Pattern of Trade, Tariffs and Regulations

The PDRY is a Communist State, with strict party control and regimentation and follows the policy of scientific socialism. The economy is under the complete control of State. Foreign trade is monopolished by Govt. Corporations. Private enterprise has a very marginal role. Very few items including Cardamom have been allowed to be imported by the private sector.

PDRY has developed a free trade zone in Aden for promotion of re-export trade with neighbouring countries. The operations in the free trade zone are with private traders. Free trade zone is also an important source of revenue to the Govt. as the Govt. charges about 10 per cent of the value of imports for operation in the zone. There is a strict foreign exchange control.

For import of goods into PDRY for domestic market, private traders have to apply for license to the Ministry of foreign trade, giving details of the commodity to be imported and a proforma invoice from the importer. Goods can be imported only afrer the import license is issued by the Ministry of foreign trade.

There is custom duty of 10 per cent on the imports of Cardamom. In addition, the Govt. has also imposed a levy known as 'MUAWAJANA' on various items including cardamom with the purpose of utilising this levy amount to subsidise the basic essential items of mass consumption. The rate of the levy varies from item to item and sometimes even on the same item. It varies from consignment to consignment. As per the Ministry of trade, a 70 per cent levy is imposed on cardamom. However, the trade sources indicated that the levy is around 100 per cent.

The retail prices of commodities imported by private traders are fixed by the Govt. while fixing retail prices, the Govt. take into account the landed cost and the reasonable margin of profit to the trader. Sometimes, if a particular trader has imported a commodity at a relatively lower price than other importers, the Govt. impose a higher levy on that particular consignment so as to match with the retail price of that commodity fixed earlier and also without allowing higher margin of profits to importer.

In the free trade zone, there are no custom duties, levies and fixation of prices, etc. The goods imported into free trade zone cannot be brought into local market without obtaining import licence and paying custom duties and levies etc. Thus, there are imports for the domestic market, as well as for free trade zone.

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Imports of Cardamom

a) Domestic market

Cardamom is not shown separately in the import statistics and grouped together with those for nutmegs. Statistics for imports of Cardamom and nutmegs for last 3 years was especially collected from the Directorate of Statistics, Ministry of Commerce and is enclosed. A perusal of 1981 statistics indicates that India exported 1,250 kilos of cardamom for 6,894 Yemani Dinars equivalent to Rs. 1,56,681. Imports from Kenya are presumably of the Tanzanian cardamom which comes from Tanzania to Kenya and then exported to PDRY.

The imports of cardamom for the domestic market is done by private traders only. Discussions with private importers and traders indicate that the annual consumption of cardamom in PDRY is around 25 mts. Out of which only 10 to 12 tons are imported directly by the traders. Some cardamom is brought by the Yemenis working in other Arab Countries, as a part of their baggage, when they visit their homes. Sometimes, cardamom is also being illegally brought into market from North Yemen by road.

The principal source of imports for the domestic market is Tanzanian Cardamom from Kenya. Traders estimate that about 10 mts. of Tanzanian cardamoms are received into PDRY. This is due to the fact that many Yemenis are settled in Kenya and have relation and links with traders in Aden. They send cardamom to their people in Aden without any formal payment. Yemeni Traders in Aden apply for an import licence involving no payment for goods and such a licence is granted easily. They might be paying for cardamom in some other way. Yemenis settled in Kenya are also happy with this arrangement as it enables them to take out their money out of the country in the form of cardamom. Further, in nil value imports, the levy imported is almost half of the normal levy which is charged on imports of cardamom from other countries. Therefore the Tanzanian cardamom is available at very low prices vis-a-vis other cardamoms.

Apart from Tanzanian cardamom, other cardamoms imported in small quantities are Indian and Sri Lankan. This is due to the imposition of heavy custom duties and levies. There are no direct import of Guatemalan cardamom into Aden. Some quantities of Guatemalan cardamom were seen at retail shops and this apparently have been brought either by the Yemenis working in other Arab countries or smuggled into PDRY from across the border i.e. North Yemen.

b) Imports for free trade zone

Most of the imports of cardamom into the free trade zone are for re-exports to neighbouring countries, mostly to North Yemen. Commodity-wise trade statistics for the free trade zone are not available.

As per trade statistics, exports of cardamom from India to PDRY during the period 79-80; 80-81 were as below:-

Year	Quantity(Metric tons)	Value (Rs. in '000's)
1980-81	23	4,946
1979-80	26	4,589

The trade in the Aden free zone is exclusively handled by private traders. Discussions with private traders indicate that the present annual imports of cardamom into free trade zone is around 35 mts.

The major sources of imports for the free trade zone are India and Sri Lanka. Till recently, India was the main supplier of cardamom to Aden. In the current season, traders have imported good quantities of cardamom from Sri Lanka. The main reason for the imports of cardamom from Sri Lanka is the substantial price advantage which Sri Lankan cardamom has. During the current season 8 to 10 mts. seems to have been imported from Sri Lanka. The price of Sri Lankan cardamom is lower by US dollars 3 to 4 per kilo.

Cardamoms imported from India into free trade zone are of AGB and AGS grade. During the current season, cardamoms imported from India were in the price range of US dollars 15 per kilo. About 20 mts. seems to have been imported from India during the current season

Traders do acknowledge the superiority of Indian Cardamom over cardamoms from other countries. However, they feel that prices of Indian Cardamoms are relatively high and unworkable in the present market conditions. Some of the importers have not been able to sell our Cardamom because the Sri Lankan Cardamom is available at relatively low prices.

Apparently, there are no imports of cardamom from Guatemala in the free trade zone. There is a lack of shipping service between Guatemala and Aden port. Further the imports in Aden are in small lots i.e. around 2 to 3 tons at a time which may not be economical and convenient to import from Guatemala. Therefore unlike other markets, Indian's main competitor in Aden is Sri Lanka and India is losing the market to Sri Lanka becuase of the high prices.

Uses :

The Cardamom has got varied uses in PDRY. It is used in the preparation of gahwa, tea, sweets, meat and other food preparations.

General findings and conclusion :

The annual requirements of cardamom for the internal consumption in PDRY may be estimated around 25 mts; out of which about 10 mts. is imported directly. Most of the imports are of Tanzanian Cardamom from kenya, as Yemeni traders have their relations in Kenya and are able to get cardamom as a gift without making payment in foreign exchange. Custom Duty and levy on cardamom is quite high and comes to about 100 per cent. Because of the heavy duties, the traders are not able to import cardamom from India and Sri Lanka. Sometimes, cardamoms imported into Aden free zone and re-exported to neighbouring areas in North Yemen, is brought illegally into PDRY without paying duties. Such cardamom is sold by traders at very low prices. Therefore, private importers are somewhat afraid and reluctant to import for domestic market.

Most of the cardamom imported into Aden free zone is re-exported to the neighbouring areas in North Yemen. The annual average imports into the free trade zone is about 35 mts. In the current season, India lost a part of the market to Sri Lanka. The main reason for this is India's relatively high prices vis-a vis prices of Sri Lankan Cardamom.

Although the cardamom market in Aden free zone is comparatively small (35 mts.), yet it has been an established market for Indian Cardamom and should make all possible efforts to retain it.

IMPORTS OF NUTMEG & CARDAMOM DURING 1979-1981 INTO PDRY

Countries from which imported	1979		1980		1981	
	Quantity (Kilo)	Value in SYD	Quantity (Kilo)	Value in SYD	Quantity (Kilo)	Value in SYD
Singapore	15,000	8,682	19,500	22,848	—	—
Kenya	12,529	72,365	2,873	16,517	9,896	59,926
Djibouti Republic	—	—	14,022	78,927	13,788	9,321
West Germany	—	—	181	470	—	—
Ireland	—	—	63	95	—	—
United Kingdom	—	—	36	155	—	—
India	—	—	12,040	98,975	1,250	6,894
Ceylon	—	—	1,000	584	—	—
Ethiopia	—	—	7,500	37,004	—	—
Total	27,529	81,047	57,215	2,55,575	24,934	86,141

Indian Re. 1=57D 0.044

List of Importers of Cardamom in P. D. R. Y. (Aden)

1. M/s. Saleh Ali Kurian,
P.O. Box 854,
Crater, Aden.
Tel. No: 52036 Cable: Kurian

2. M/s. Salem Saleh Saiba & Sons,
Union Bazar,
Main Bazar,
P.O. Box 4208,
P.D.R.Y.
Tel. : 53425, 52289
Telex : EL-Hurruah 500 Cable : El-Hurriah

3. M/s. Salem Bushanfer & Sons,
P.O. Box 76,
Crater, Aden.
Tel. : 52577
Cable : (Basloom) C.R. 202

4. M/s. Ali And Yeslam Ahmed,
Mohamed Bahamish,
P.O. Box 4003,
Crater, Aden

5. M/s. Mohamed Abdulla Almohdar & Bros.,
Shop No. 59/62.
Dana Bazar,
Aden, P.D.R.Y.
Tel. : 51994 Aden Teleg. : Tazoor

6. M/s. Omer Saeed Balamach, Crater,
P.O. Box 4219,
Aden, P.D.R.Y.
Tel. : 53317
Cable : (Balamach)

7. M/s. Mohamed Omer Barahim
Bamashmus,
Importer – Exporter & General
Merchant,
P.O. Box 992,
Crater, Aden, P.D.R.Y.
Tel. : Shop 51551 Res 24495
Cable : "Yamossahell"

8. M/s. Mohamed Abdulla Ahmed Banafa,
Import - Export & Home Merchant,
Cloth Bazar,
Shop No. 31/59,
P.O. Box 869,
Crater 101,
Aden, P.D.R.Y.
Tel. : 52923 Telex : Colour

9. M/s. Vora Valabhjee Tarachand,
Free zone Import-Export,
P.O. Box 10,
Crater,
Aden, P.D.R.Y.
Tel. : Office 52118
St. Point 24879 Res. 53958
Cable : Veravali Teleg. : 500 AD

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11. M/s. Hashem Suleman Ravera,
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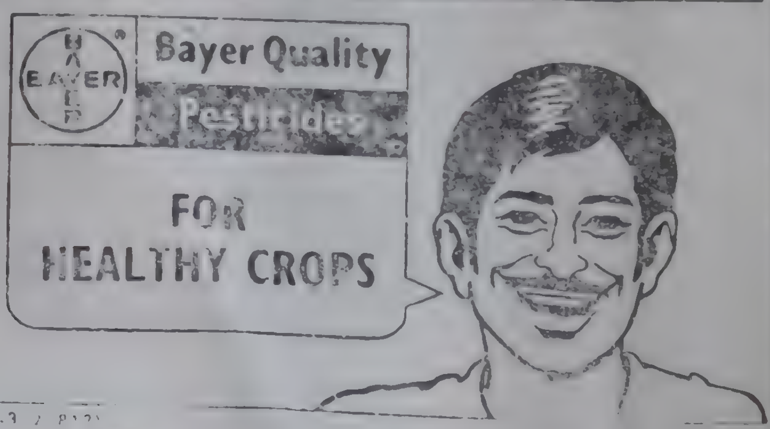
NOTE : Importers at Sl. No. 1,2,5 and 7 import relatively large quantities.

Parties at Sl. No. 11,12 and 13 are commission agents and book orders for cardamom.

Cardamom:
Queen of spices,
continuously being attacked
by various pests.



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instructions given
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The text of the speech delivered by Shri K. Mohanachandran, Chairman at the first Meeting of the reconstituted Board (42nd meeting) held at Ernakulam on 11th January 1983.

I have great pleasure to welcome all the members of the newly constituted Cardamom Board. Let me use this occasion to congratulate them for being nominated as members of the Board. I am sure that their knowledge and experience of cardamom industry will be of great benefit to guide the policies of the Board properly and I look forward to their active participation, guidance and co-operation in formulating the policies of the Board for the benefit of the industry and the people behind the industry.

Let me also welcome the special invitees whom we have invited because of their long association with cardamom industry and their knowledge of the industry. Their presence will help to give a practical orientation for the discussion of the Board. I will be failing in my duty if I do not make a special welcome to the Members of Parliament who have made it convenient to attend this meeting amidst their busy schedule of activities.

As far as cardamom industry is concerned, the industry has been passing through many difficulties during the last few years. As you know, cardamom is a traditional crop cultivated in the Western Ghat region of Kerala, Tamilnadu and Karnataka. In the year 1981-82, there was considerable reduction of crop as a result of the spread of Azhukal disease and as a result of the delay in pre-monsoon showers, the crop was estimated to be around 4100 MT. But this year because of the failure of the monsoons and the severe drought, there has been an unprecedented fall in production. An analysis of the trend in sales at the auction centres during the current season up to the end of December 1982, indicated that there is reduction of 40% in auction arrivals in Kerala–Tamilnadu region and around 25% in Karnataka region. But it is felt that there is an increase in the direct sales by planters to dealers. The latest estimate indicated by the field studies is that there will be 30-35% shortage in crop in the Kerala-Tamil region and around 20% in Karnataka. The estimated crop is only 2100 to 2200 tons from Kerala–Tamilnadu region and 800 tons from Karnataka.

Members may be aware that Indian Cardamom has been facing stiff competition from Guatemalan Cardamom in the international market. The main problem faced in this markets is that our price is much higher than the price at which Guatemalan Cardamom is offered. Even though Indian Cardamom is considered to be best in quality, there is a tendency to go in for cheaper varieties.

Regarding the exports also there has been a significant fall in exports compared to last year. The export in 1982-83 till the end of December is 711 tons valued at Rs. 11.49 lakhs with unit realisation of Rs. 161.00 as against 1761 MT. valued at Rs. 22.70 lakhs with unit value of Rs. 129.00. The reasons for the short-fall in exports

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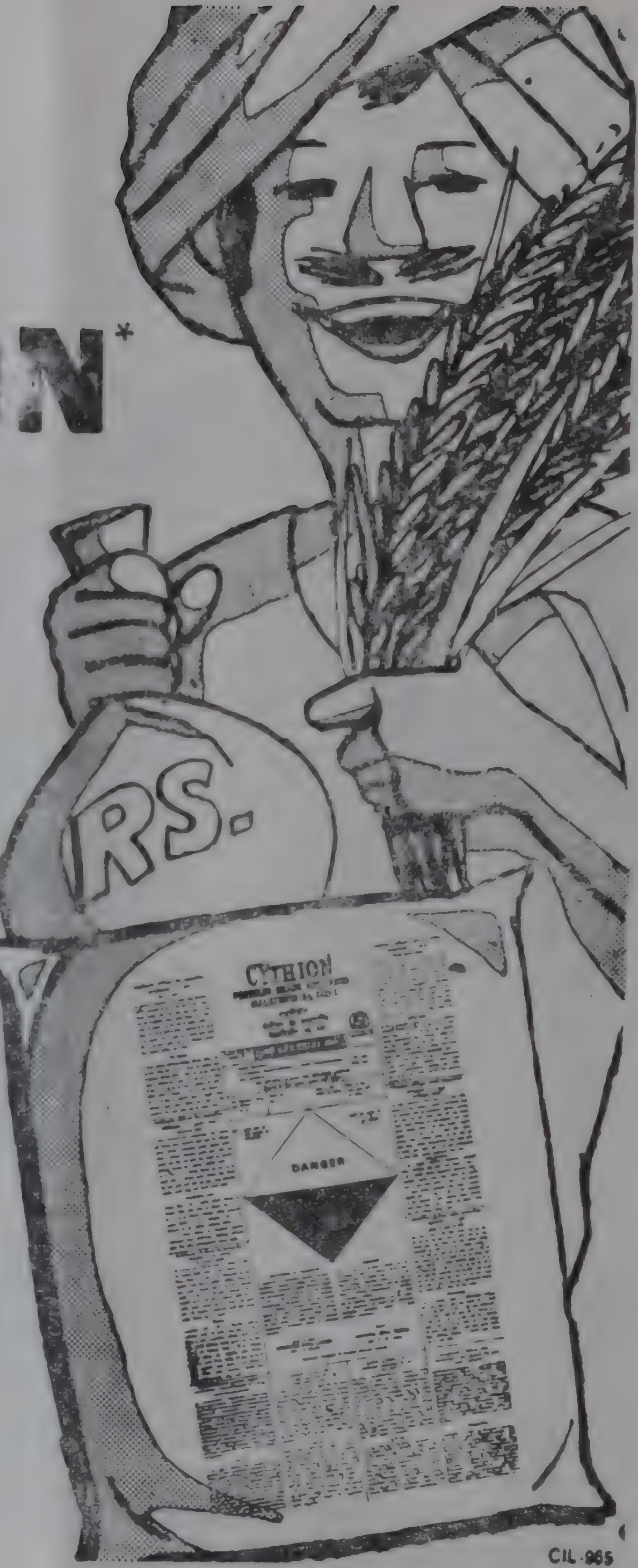

CIL-965

are many. In the beginning months of the financial year, April-August which was the off season, the exports dropped mainly because of the shortfall in production last year, and also because of lack of demand from Middle East as the prices at which India could offer cardamom was high and as a result of which, the whole quantity available in India was sold internally. There was considerable delay in crop arrival this year as a result of delayed rains. The new crop became available for export only in October end to November and this delay in crop arrival as well as the reduction in crop has also affected the performance in export. The export in December 1982 was only 256 tons as against 355 tons last year The price at the auctions have also been very much higher this year compared to last year. The season opened with higher prices in the auction and the price has, thereafter moved upward steadily. The average auction price during last week was Rs. 200/– per kg. in Vandanmettu and Rs. 171/- per kg. at Saklespur while the corresponding prices last years were Rs. 134/- in Vandanmettu and Rs. 95/– in Saklespur. The reason for the sharp increase in price is mentioned as shortage of crop and internal demand. Whatever be the reason, the Board is greatly concerned with the fall in exports. Earlier export target was 2300 tons for 1982-83 and this had to be brough down because of the drastic fall in crop. I suggest that the members shall certainly consider ways and means of promoting the exports in the interest of the industry.

The last meeting of the Board had taken a decision to request the Government of India to allow cash compensatory support for cardamom exports in view of the intense competition offered by Guatemalan Cardamom. In fact we have been requesting for the same for some years. As a result of the continued and sustained efforts of the Board, the Government of India has announced a cash compensatory support of 7% for packaged cardamom with packings less than 2 kgs. I utilise this occasion to thank the Government of India for this measure and it is expected that this will go a long way in making our cardamom competitive in the international market. We had also taken up the matter of reduction of sales tax with Government of India. As an export commodity, cardamom exporter should get the benefit of tax exemption and if this is done, this would help the exporter to reduce the price to the level of one dollar which might improve our competitiveness in the international market. This matter was discussed in a meeting with the Chief Minister and Finance Minister of Kerala and they have promised to consider sympathetically.

The market information from Bahrain office mentions that the main difficulty of Indian Cardamom is that its price is higher by 2 to 5 dollars. It is said that we cannot compete with the price in international market, because our productivity of cardamom is low compared to that in Guatemala. This is mainly attributed to oldage of plantation and poor maintenance and management as a result of the poor inflow of capital. Realising that increase in productivity is the only permanent solution to improve the industry, the Board has submitted a re-plantation subsidy-cum loan scheme for replanting about 11000 hectares costing Rs. 400 lakhs as subsidy from Government. The scheme is approved by the Planning Commission and it is hoped that the same will be sanctioned by Government of India as early as possible, so as to implement it in the next seasons.

As far as Karnataka region is concerned, we have last year, opened two field offices and a regional office to give the Karnataka farmers better service from the Cardamom Board. As the processing facilities for curing green cardamom was not adequate in Karnataka, we have implemented a special scheme for giving 25% subsidy for construction of curing houses and 100% subsidy for curing houses constructed by co-operatives or farmers associations. It has proved attractive and a large number of applications are received. Most of the applications were given subsidy and there is a regular flow of applications.

As you know, there was a proposal for a Cardamom Trading Corporation pending with Government of India for some time. Recently a Cardamom Trading Corporation is registered with the Registrar of Companies, Bangalore with head quarters in Karnataka. It is hoped that the Corporation will start functioning as early as possible. I must also mention that after the last Board meeting, the Karnataka High Court has given a judgement striking down the inclusion of Cardamom under the Agricultural Produce Marketting Act, As a result, the Cardamom Board will be in a position to implement the Cardamom (Licencing & Marketing) Rules 1977 in the Karnataka region also effectively and it is expected that the difficulties in the marketing field in Karnataka can be progressively reduced.

The Board has sponsored two delegations abroad recently. A sales-cum-study delegation led by Chairman, Cardamom Board and three members from producers' side of Cardamom Board was sponsored to popularise Indian Cardamom Oil in Western Europe. The delegation visited important consumers and dealers of cardamom oil in Germany, Switzerland, France and U. K. and had discussions with them. This delegation was sponsored by I.T.C., Geneva. Report of the Delegation is placed before the members. The Board has also sponsored a sales delegation recently consisting of 3 exporters to Middle East on 28th of December 1982, under Market Development Assistance of Ministry of Commerce. The Delegation is just returned after touring the countries of Saudi Arabia, Kuwait and UAE and I am sure that the delegation could make useful contacts.

As far as Ammomum Cardamom is concerned, as you know, the Board has set up a Deputy Director's Office and 4 Assistant Director's Offices for Sikkim and West Bengal States. Raising of nurseries and distribution of quality seedlings free of cost, improving curing of cardamom in curing houses set up by the Board and maintenance of demonstration plots are some of the activities taken up by the Board in Sikkim. A Research and Development Centre is started in Sikkim last year to conduct research on large cardamom and to evolve new improved varieties.

Friends, I have tried to give you a gist of some of the important activities of the Board. We have a large agenda and I do not want to take your time before we go in to the agenda.

But before I conclude, I would like to inform you that one of our senior most technical officers, Sri K. V. George, who had worked as Director of Cardamom Development for the last 16 years has retired from service. He has been a member of the Board all these years and has done very significant service for the industry and the Board. Let me place on record the appreciation of the Board for his service. Let me wish him happy, prosperous retired life.

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"World Trade Centre", Mahatma Gandhi Road.
ERNAKULAM SOUTH, COCHIN-682 016.

(It pays to grow and export all items of spices)

Market Report

Qatar :

Qatar has two distinct channels of cardamom trade. Cardamom is imported by the Department of Supply, State of Qatar as well as by private traders. Cardamoms imported by the Department of Supply is distributed to the public through the various authorised shops and cooperative stores at fixed prices, which are usually subsidised ones. Cardamoms are also imported by private traders, who sell it in the open market. Thus, there is always some competition between private traders and the Department of supply.

The annual cardamom requirements for Qatar are estimated around 150 to 200 mts; out of which about 35 to 40% is imported by the Department of Supply. Till now, the Department of Supply is importing our cardamom either directly from some of our exporters who are registered with the department or through local traders, who import cardamom from India for supply to the State. Private traders mostly deal in Guatemalan cardamom as they find it cheaper and easier to sell.

The Department of supply are still carrying stocks of about 50 mts. of Indian Cardamom (as on 1st November '82). Their present supply to the public is around 3½ to 4 mts. per month. They are facing a competition from private traders and their prices are relatively high vis-a-vis the prices prevailing in the retail market. Their sales have been affected because of the selling of Guatemalan cardamom at relatively low prices in the open market.

The department of supply have now reduced their retail prices for cardamom with effect from 28-11-82. This is expected to increase their sales and enable them to clear their old stocks. This would also create fresh demands for Indian Cardamom.

Department of Supply have not made any purchases during the current season. It is likely that some purchases may be made by them in next two to three months.

The cardamom market in Qatar is quite active and there are good demands from private traders. There are very little stocks of cardamom in the market. Good orders have been placed with Guatemala and consignments were expected to arrive by end November '82. Some small quantities of Indian Cardamom have also been imported by air.

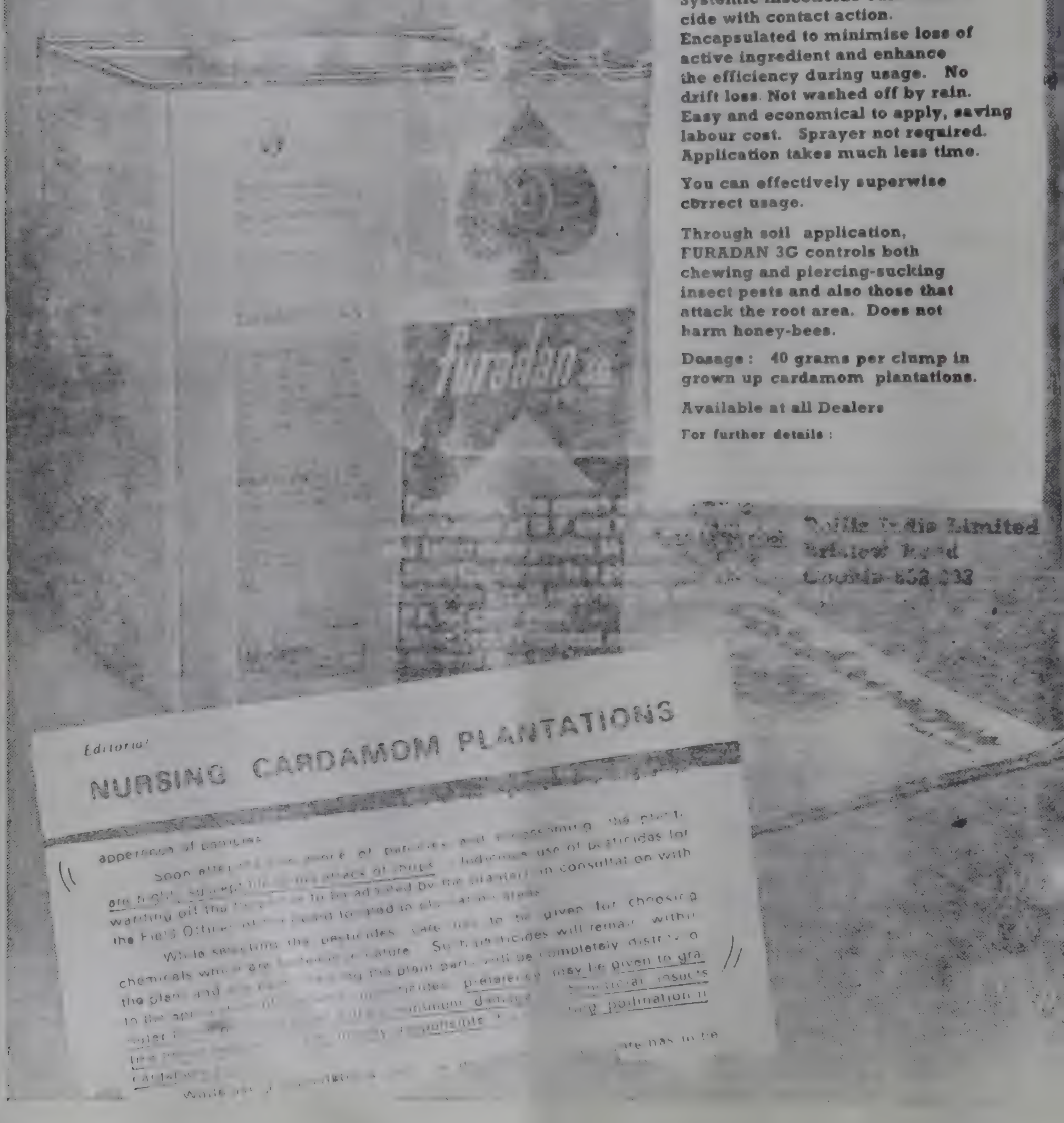
Most of the cardamom requirements in Qatar is of the medium qualities, i. e. in the price range of US Dollars 12/- to 15/- per kg. A comparison of offers from Guatemala and India indicated that Indian prices were higher by US Dollars 3 to 4 per kg. Traders are quite keen to import cardamom from India as it is relatively more convenient and takes less time in getting it from India rather than from Guatemala. But the high price differences makes it uncompetitive and unattractive. Traders feel if the prices were higher by 50 cents to 1 Dollar only, India could have sold more.

Arabs in Doha are quality conscious and traditional Arabs have a preference for Indian Cardamom. Indian Cardamom enjoys some goodwill, which should be exploited by Indian exporters.

Saudi Arabia :

As per the National Foreign Trade Statistics published by the State of Saudi Arabia, total recorded imports of cardamom into Saudi Arabia during the last three years were :

Nursing Cardamom plantations?
Leave it to Furadan 3G



Editorial

NURSING CARDAMOM PLANTATIONS

Systemic insecticide cum nematicide with contact action. Encapsulated to minimise loss of active ingredient and enhance the efficiency during usage. No drift loss. Not washed off by rain. Easy and economical to apply, saving labour cost. Sprayer not required. Application takes much less time.

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Through soil application, FURADAN 3G controls both chewing and piercing-sucking insect pests and also those that attack the root area. Does not harm honey-bees.

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Year	Total Qty (mts)	Imports value '000 Rs.	Imports from India Qty (mts)	value 000' Rs.	Imports from Guatemala Qty (mts)	value 000' Rs.
1979	2678	409962	1261 (47%)	187048 (45%)	676 (25%)	117999 (27%)
1980	3236	519835	1261 (38%)	226309 (43%)	1381 (42%)	213337 (41%)
1981	4106	467299	1043 (25%)	139412 (30%)	2377 (58%)	259491 (55%)

While the total direct imports of cardamom by Saudi Arabia have been steadily increasing over the year's India's share have rather been declining. Our market share has declined from 47% in 1979 to 25% in 1981, while Guatemala has improved its market share from 25% in 1979 to 58% in 1981. During 1981, the overall supply of Guatemalan cardamom to Saudi Arabia was more than double the supply of cardamom from India.

As per statistics, cardamom exports from India to Saudi Arabia during the last three years were:

Year	Qty.(mts)	Value (Rs. Crores)
1979-80	868	17.40
1980-81	885	14.40
1981-82	400	6.22

The above figures also indicate that direct cardamom exports to Saudi Arabia from India during 1981-82 have come down by more than 50%.

There is apparently a large difference between the statistics published in Saudi Arabia and Indian statistics. This is explained by the fact that Saudi Arabia receive large quantities of Indian and Guatemalan cardamom from neighbouring markets, particularly from Kuwait and Jordan, by roads. It seems that cardamom carried by road from these countries is recorded as imports from the countries of origin rather than from the countries of imports. For example, about 80% of India's exports to Kuwait gets re-exported to Saudi Arabia, which seems to have been included in the imports of cardamom from India. But the matter of fact is that India's market share of cardamom in Saudi Arabia is declining in a dangerous way.

At present, there are generally good demands for cardamom. Markets in Riyadh and Dammam are relatively more active. In Jeddah, the market is not as good and active as it should be around this time This is primarily because traders are still carrying some old stocks of Guatemalan cardamom and the overall demand for cardamom in Jeddah and neighbouring areas seems to have gone down.

Riyadh has received good quantities of cardamom from India by air in October and November. Consignments of Indian cardamom by sea had not reached there till November end. Fresh crop of Guatemalan cardamom has not arrived. Traders in Riyadh usually do not directly import cardamom from Guatemala; they rather buy it ftom traders bringing cardamom from Jordan.

Cardamom market in Dammam is also quite strong. Consignments of Indian cardamom were still on way and expected to arrive Dammam sea port by end November. Good quantities of Guatemalan cardamom have also been booked by traders and is expected to arrive by first week of December.

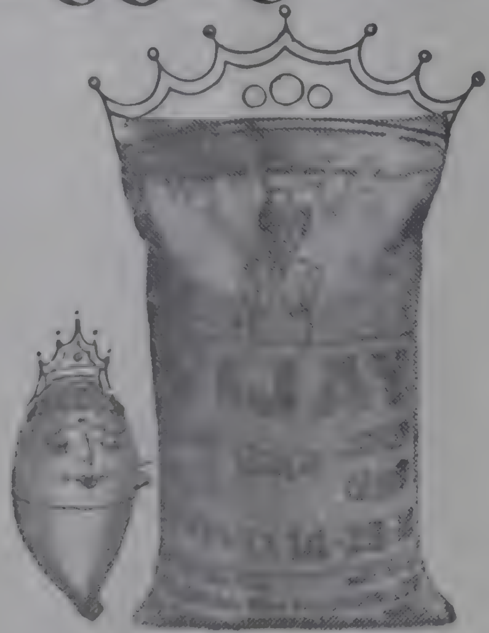
Importers and traders in Saudi Arabia have expressed demands for bold size and superior qualities of Indian cardamom. Quality conscious traditional consumers in Saudi Arabia do not mind paying extra for our bold size green cardamom. Further, the difference between the prices of Guatemalan cardamom and Indian cardamom is relatively less in superior qualities as compared to medium and lower medium qualities. Therefore, importers prefer to import superior qualities in our cardamom.

The substantial price difference in favour of Guatemalan cardamom have been primarily responsible for India's loss of market to Guatemala, during the last three years.

Regular supplies in large quantities of fresh crop of Guatemalan cardamom from Jordan are expected to arrive in different areas. of Saudi Arabia from end December onwards. With these arrivals, Saudi traders fear that the market would get weaker.

At present, Saudi market offers good prospects for cardamom business and Indian exporters should take full advantage of good demand from this market. With more drive and intensive efforts by well established exporters, India can sell larger quantities and improve our market share.

The king of fertilizers for the queen of spices



Cardamom, the queen of spices, needs the balanced nourishment of N P and K to grow into a healthy crop and bring more profits to you.

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The phosphorous in Vijay 14-28-14 is water soluble, which means it's easily available to your crop. This easily available phosphorous develops the root system and strengthens the plant to withstand drought conditions.

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News Shorts

Cardamom Board Meets

The first meeting of the recently reconstituted Cardamom Board was held at the Conference Hall of Coir Board in Cochin on 11th January 1983 under the Chairmanship of Shri K. Mohanachandran Chairman of the Board.

Mr. K.S. Skaria (Jr.), representing large growers of cardamom in the Board was unanimously elected as Vice Chairman of the Board for the year 1983-84. The meeting was attended by Smt. Monika Das, M.P., Shri V.S. Vijaya Raghavan M.P., Shri D.M. Putte Gowda M.P. and Representatives of the States of Kerala. Karnataka and Tamil Nadu besides representatives of the various interests of Cardamom Plantation Industry.

The meeting interalia discussed in detail the problems faced by the Cardamom Industry at present and made suitable suggestions to solve them.

The Board unanimously passed a resolution urging the Government of India not to allow any imports of cardamom into India and also to ban the same ever in future.

Distribution of Educational Stipend

The inaugural function of distribution of Educational Stipend to the children of cardamom estate workers for the year 1982-83 was held at Government Tribal High School, Kattappana. Mr. P.J. Joseph, Minister for Revenue, Kerala inaugurated the distribution of the educational stipend.

Mr. N. Balan, Principal Government College, Kattappana presided over the meeting.

In his inaugural address the Minister appreciated the labour welfare measures adopted by the Board in improving the Socio-economic conditions of the cardamom estate workers and their wards. He also advised the beneficiaries to utilse the opportunity offered by the Board.

Seventeen students of the school were distributed educational stipend. A collection of selected books worth Rs. 7,000/- was donated by the Board for opening a library in the Government Tribal High School. Mr. K. Mohanachandran IAS, Chairman, Cardamom Board; Mr. K.J. Mathew, Panchayath President, Kattappana; Mr. K.T. Baby, St. George High School, Kattappana; Mr. K K. Devasia and Mr. K.P. Chandy, Headmaster, Government Tribal High School, Kattappana also spoke on the occasion. Mr. K.G. Nayar, Secretary, Cardamom Board welcomed the gathering and Mr. P.G. Mathew, Assistant Director proposed a vote of thanks.

The variety entertainments staged by the students of the school added colour to the function.

Seminar at Kattappana

A Seminar on Cardamom was held at the Merchants' Association Hall, Kattappana recently. This meeting, was arranged by the Field Officer, Kattappana as part of zonal Seminars being arranged in different parts of the cardamom growing tracts. It was attended by more than 100 growers.

The Seminar was presided over by Mr. John M. John, Director in-charge Cardamom Board. In his presidential address, he explained the salient features of the replanting finance scheme proposed to be implemented by the Board. The Seminar was inaugurated by Mr. K.G. Nayar, Secretary, Cardamom Board. In the inaugural address, he explained the stand taken by the Cardamom Board in cardamom land assignment by recommending long term lease or permanent assignment to the growers for enabling them to avail long and medium term loans from financing institutions for cardamom development. He reiterated the need to increase the production by all possible ways of adopting improved methods of cultivation. Mr. P K. zachariah, Deputy Director, ICRI, Myladumpara explained the importance of soil management in economic cardamom cultivation. Mr. K.M. Thomas, a representative of the Growers' Association also spoke on the occasion. Mr. P.G. Mathew, Assistant Director (Central Zone), Cardamom Board welcomed the gathering and Mr. P.L. Luka, Field Officer, Kattappana proposed a vote of thanks.

VIth all India Ideal Home Exhibition, Madras

Cardamom Board participated in the VIth All India Ideal Home Exhibition held at Madras recently. The Exhibition was organised by All India Manufacturer's Organisation. Attractive photo panels showing various uses of cardamom, different grades of cardamom etc were displayed in our pavilion. Literature on cardamom were distributed to the visitors. Large number of visitors from India and abroad visited and appreciated our pavilion.

Private Sector Imports into Pakistan from India

At the present time trade between India and Pakistan is being handled in Pakistan by the public sector, and in India both by the State trading agencies and the private sector. Pending the conclusion of a new bilateral trade agreement, and within the present trade regime, the Government of Pakistan has approved the import of certain specified items by the private sector in Pakistan through the Trading Corporation of Pakistan (TCP).

According to a press release issued by the Pakistan Embassy, New Delhi, the Pak. authorities have laid down detailed procedures for private sector imports from India into Pakistan. Pakistani importers are required to submit applications to the TCP, Karachi/Lahore.

TCP's role will be that of an official agency to arrange imports from India on behalf of the private importers who shall, as in normal commercial transactions, negotiate prices, specifications, delivery schedule and other items.

Further details about the procedure for booking of orders, contracts, clearance of goods, pre-shipment inspection, TCP Commission, claims, losses damages and other related matters can be obtained from the Commercial Section of the Pakistan Embassy in New Delhi

W Germany Changes Regulations for Visas

Visitors from Africa, America, Europe and Oceania wishing to stay in West Germany longer than three months will have to present a visa on arrival, according to a recent press report from Bonn, West Germany. The decision would affect the nationals of 75 countries.

The only exemptions will be the citizens of European Economic Community countries and eight other nations with which West Germany has signed special bilateral agreements. These nations are Austria, the Dominican Republic, Honduras, Mexico, Monaco, Spain, Switzerland and the United States.

Visas so far had only been required from Citizens of communist countries and small group of other nations. However, West Germany has always insisted on a visa from foreigners wishing to take up employment there.

The new visa regulations are the West German Government's first step to stop the influx of foreigners which has lead to outbreak of zenophobia at a time of rising unemployment.

Election of Vice-Chairman

The Board unanimously elected Shri K. S. Skaria (Jr.) as the Vice-Chairman. The Chairman and other members of the Board congratulated him on the occasion. While thanking the members, Mr. Skaria said that the cardamom industry is facing a very difficult time as the production and export have gone down considerably. He suggested that the Board should give a serious thinking to get over the difficult situation. He assured his whole-hearted co-operation in remedying the situation.

Overseas Trade Enquiries

1. M/s. Abdulla Al Rifai Trading
   Est., P.O. Box No. 34168,
   Al Adaliya, Kuwait.
   Edible Cardamom Extract

2. Mr Eoesje Chia
   Managing Director
   Flat B, 9/FL., Kwong on
   Bank Building, 728-730,
   Nathan Road, Kowloon,
   HONG KONG
   Cardamom

Planter's Meeting at Kabi

A meeting of the cardamom growers of Kabi area was held at Kabi (North Sikkim) on 14th December, 1982. Shri Homi J.H. Taleyarkhan, Governor of Sikkim was the Chief Guest.

Shri T.D John, Deputy Director, Cardamom Board welcomed the gathering and explained the various activities of the Board. The cardamom growers explained to the Governor the problems faced by them in marketing of their cardamom, difficulties in raising finance for cultivation and about the recently introduced Central Sales Tax. The Governor has shown very keen interest in hearing the problems and assured to arrange credit facilities through State Bank of India at nominal rate of interest.

The Governor and the cardamom growers were taken to the Cardamom Curing House at Kabi and explained its working by the Board Officials. The Governor was presented with samples of Large Cardamom cured in Kabi Cardamom Curing House, and Small Cardamom. Leaflets on cardamom cultivation, processing etc. were distributed among the growers. The Governor also visited the Board's office at Kabi and Mangan.

Cardamom Growers Meeting At Devaldakera

The Cardamom Growers Meeting was held at Panchayath Hall, Devaldakera, Saklespur recently. Sri D.A. Putte Gowda, Chairman of Village Panchayath, Devaldakere was the president of the meeting and Sri A.L. Jayadevappa, Cardamom Board member, Sri D.A. Umapathi Gowda and Sri D.N. Gunde Gowda, Planters were the Chief guests Sri D. N. Suresh welcomed the gathering

On discussing the problems of the growers Sri D.N. Gunde Gowda suggested that the rate of the cardamom seedlings is very high and it should be minimised or the subsidy should be enhanced to 50%. He requested that like in Coffee Board a Interest Subsidy should also be given by the Cardamom Board.

Sri D.S. Lokesh Gowda, a well-known cardamom grower emphasised the need to instal electric drier at Devaldakere, he also demanded for arranging the supply of sprinkler irrigation equipments through Co-operative Society which will benefit most of the small growers.

Sri D.N. Umapathi Gowda describing the problems of the Cardamom Growers pointed out that Demonstration Plot should be taken from the first year of planting itself. He requested that the subsidy for the bee-hives should be fixed at 50% of the actual cost of the bee-hives. He stressed that the Cardamom Board should give liberal credit facilities to the growers for the construction of labour quarters as in the Coffee Board.

The Chairman, Village Panchayath, Devaldakere requested Capital grant from the Cardamom Board to the primary health Unit at Devaldakere.

Sri A.L. Jayadevapa strongly opposed importing cardamom from Guatemala. He also explained the growers about the control of Katte disease on the basis of his own experience that he has got on cardamom cultivation.

Mr D.S. Lokesh Gowda proposed vote of thanks.

Karnataka Pradesh Krishik Samaj Hand Book

Karnataka pradesh krishik samaj has published an agricultural hand book cum diary of 1983 edition. This annual publication of the samaj contains information regarding agriculture, animal husbandry, forest, horticulture, besides essential statistics of the state, 20 point programme, facilities available from the department of agriculture etc.

Members interested to have the copies may contact:

Karnataka Pradesh Krishik Samaj,
Nrupathunga Road,
Bangalore – 560 002.

20-Point Programme Gains Momentum

Momentum of the implementation of the 20-Point Programme has picked up According to a review made by the Planning Commission, many schemes under the programme registered accelerated progress during the period July-September as compared to the quarter previous to this, i.e. April-June

Thus, 13,087 bonded labourers were rehabilitated during July September as against only 2.404 bocded labourers durin April-June. The number of scheduled caste families assisted rose to 478,000 in the second quarter of the year as against only 130,000 families during the first quarter. Similarly, scheduled tribe families assisted were 340,000 as against 26,000 families during the first quarter.

There was a marked improvement in the scheme of tree plantation also. Between July and September 1359.9 million trees were planted as against 144.5 million trees during the period April–June notwithstanding that a number of States were affected by floods and drought. Thus, 77.7 percent of this year's target of planting 1937.35 million trees has already been achieved in the first six months of the year.

The public distribution system was greatly strengthened with the addition of 12,118 fair price shops as against 2,358 shops during the first quarter.

As many as 8,576 problem villages were provided with a source of safe drinking water during the second quarter as against 6,266 villages in the previous quarter Encouraged by the progress of this scheme, the Government is contemplating an upward revision of the annual target of covering 33,848 villages to 42,000 villages. An additional allocation of Rs.240 million has been approved by the Planning Commission under the centrally-sponsored accelerated rural water supply programme.

The number of sterilisations done during the July–September quarter was 765,000 as compared to 435,000 during the first quarter, The States and Union Territories which recorded impresive increase were Uttar Pradesh, Assam, Haryana, Tripura, Himachal Pradesh. Sikkim, Madya Pradesh, Arunachal Pradesh, Andaman and Nicobar Islands and Delhi.

Reports received by the Planning Commission indicate that 74.1 million mandays of employment were generated in the second quarter as against 57.4 million mandays during the previous quarter.

The number of new biogas plants at 4,520 during the second quarter was marginally higher than 4,471 biogas plants set up during the first quarter.

Indo-Vietnam Trade Protocol

India and Socialist Republic of Vietnam concluded a Trade Protocol for exchange of goods worth US $ 6 million, at New Delhi recently. The Protocol was signed by Mr. Abid Hussain, Commerce Secretary on behalf of India and by Mr. Dau Ngoc Xuan, Vice Foreign Trade Minister on behalf of Vietnam.

Under the Protocol, India will export caustic soda, cotton yarn insecticides and material for insecticides, spares for textile machinery, antibiotics and material for antibiotic and chemicals for industrial purposes. Vietnam will export cement, rubber, apatite and cashewnuts to India. Specific contracts for import and export of goods and commodities under the Protocol will be concluded between the relevant trading orgnnisations or firms of the two countries on the basis of mutually acceptable prices and quality requirements.

Agro-Gulf 1983

The United Arab Emirate (UAE) Ministry of Agriculture and the Abu Dhabi Chamber of Commerce and Industry are jointly sponsoring an exhibition and conference in October 1983. Foreign exhibitors will have in this show a direct access to the Gulf market for agricultural equipment and services for fisheries, horticulture. efforestation and of course agriculture. Further information from:

Mr. Hytham Zain Aldin
General Manager
Gulf Arab Marketing and Exhibition Co.,
P.O. Box 610
Abu Dhabi (UAE),
Telex : 23896-GAMEX
EM

Dubai Fair

Consumer products, food, apparel, tea and spices, gold jewellery, home furnishings, footwear, boats, toys and carpets shall be on display in Dubai Fair scheduled form March 31 to April 9, 1983. Further information from:

Fairs & Exhibitions
P.O. Box 9209
Dubai (UAE) Telex: 47474 DIT
EM

Industry Snippets

gh Melting Insulating Wax

Defence Materials Stores Research evelopment Establishment, Ministry of Defence, anpur has developed high-melting insulating ax as a substitute for the imported okerline ax, which is used in electronic industry as an sulating medium in the high radio-frequency elds.

A fairly good demand for this product can expected as it can be utilised by manufacturers the electronic industry, connection adopters etc.

The process has been studied on the boratory scale and the product has been tested the Chief Inspectorate of Electronics, angalore. All the raw materials are available the country. Simple equipment like heating ssels, heating arrangement and stirrers etc. e required. The cost of production has been orked out at Rs. 4.50 per kg. An investment Rs. 30,000 for a 20 kg. batch is required.

reservation of Fish

Institute de Investigaciones Technologicas as developed a low cost process for eservation of fish. In this process, the split sh are buried in salt until the body fluids form brine liquor. At 30° C, 72% relative humidity e climatic conditions can be used for the lting/drying process. If relative humidity is gh (80-90%), salting is followed by drying. he product is sealed in polyethylene film bags nd has a storage life of three months at 25 C nd 85% relative humidity.

il from Tamarind Kernel

Tamarind kernel contains nearly 6 to 8 er cent oil recoverable by solvent. The process volves roasting and decorticating of tamarind kernels in a roller-beater. These were moistened and disintegrated in a hammer mill. The resulting particles were flaked, cooked in a kettle cooker and passed through an expeller to give a cake like material. The kernel cake is extracted with normal hexane solvent, leaving the oil.

It is suitable for use in paints and varnishes. The de-oiled tamarind kernel powder could be used for industrial starch extraction in cotton and jute industries.

Separating The Rice Germ

Scientists of the paddy Processing Research Centre (PPRC), Tiruvarur, have recently developed a method of separating the rice germ (embryo) from brown rice before polishing. This method, it is stated, can be applied on a large scale.

Apart from the non-edible nature of this contamination the keeping quality of the rice germ is also very much affected.

A simple equipment has been designed and fabricated. The clean brown rice is fed into this unit and kept in a state of suspended motion so as to avoid any abrasion or other mechanical damage to the grain. Friction caused between the grain results in some polishing and separation of the germ.

The walls of the chamber are perforated so that as soon as the germ gets detached, it is blown out by air through the perforations.

Some degree of polishing also occurs at the same time, with the result that what emerges is a mixture of germ and fine bran in approximately equal proportions from which the germ can be separated by sieving and winnowing.

It is now possible to recover more than 95 per cent of the available germ in a highly purified form. The parboiled rice germ can also be fully removed by the degermer but the yield is only half of that from raw rice. Modern rice mills with a milling capacity of 100 tonnes can easily produce about 1.5 to 2.0 tonnes of germ a day.

Work on the fabrication of a continuous de-germer which can form part of modern rice mills and stabilisation of the rice germ by easily adoptable methods are now under study.

Fuel Oil from Waste

From detection of tuberculosis to generation power, coconut wastes can be put to a variety of new and unorthodox applications.

The Philippine ministry of energy is now considering a nationwide coconut diesel oil programme in its revised energy programme for 1982-86. It is planned to displace 20 per cent of the country's diesel oil use with refined coconut oil in various sectors.

The Philippine Coconut Authority is trying coconut oil dust as a substitute for poultry and animal feeds. The animal feed is composed of coir dust, ground corn and copra meal and poultry is made of coir dust, rice bran, coconut residue, sea shells and dried fish.

The Phillippines in conjunction with Japan's Kao Soap Company has set up Coco-chemicals to extract fuel oil and other substitutes for petrochemicals from coconuts.

Another firm, Henkel Chemicals of West Germany and United Coconut Mills of the Phillippines costing about S 100 million. The plant will convert coconut oil into high value chemicals such as glycerine and other industrial raw materials.

Fuel-Saving Solution Concentrator

A new type of energy-saving solution concentrator is based on a specially developed PBIL (Polybenz Imidazolone) reverse osmosis membrane for concentrating dilute solutions. Compared to conventional cellulose acetate membranes, it requires a very small amount of energy for thin water solutions like fruit and vegetable juices to be concentrated simply by applying pressure to remove the bulk of water content. It thus saves the fuel consumed in conventional process in which the dilute solutions are heated for concentration. The new concentrator features a wide acidity range of 1-12pH and offers high resistance to both organic and inorganic substances.

Cashew Apple Beverages

Beverages based on cashew apple juice are poised to enter the market soon with the technology developed by CFTRI.

Full exploitation of cashew apple for making beverages has so far been constrained by the astringent and acrid principle inherent in the fruit which makes it unsuitable for table purposes. This disadvantage has been overcome by a suitable treatment devised by CFTRI.

The process for extraction of juice from the fruit involves sorting, washing and slicing of the fruits, and finally extraction of juice. After suitable treatment, a clear supernatant liquid is obtained and used as the base for preparing ready-to-serve beverage and bottled.

Highly acceptable blends could also be prepared from a combination of cashew apple and pineapple juices or cashew apple and lime juices.

Cashew apple juice can be produced in the existing fruit and vegetable processing units with minor modification of equipment and machinery.

Oxygen Decontamination

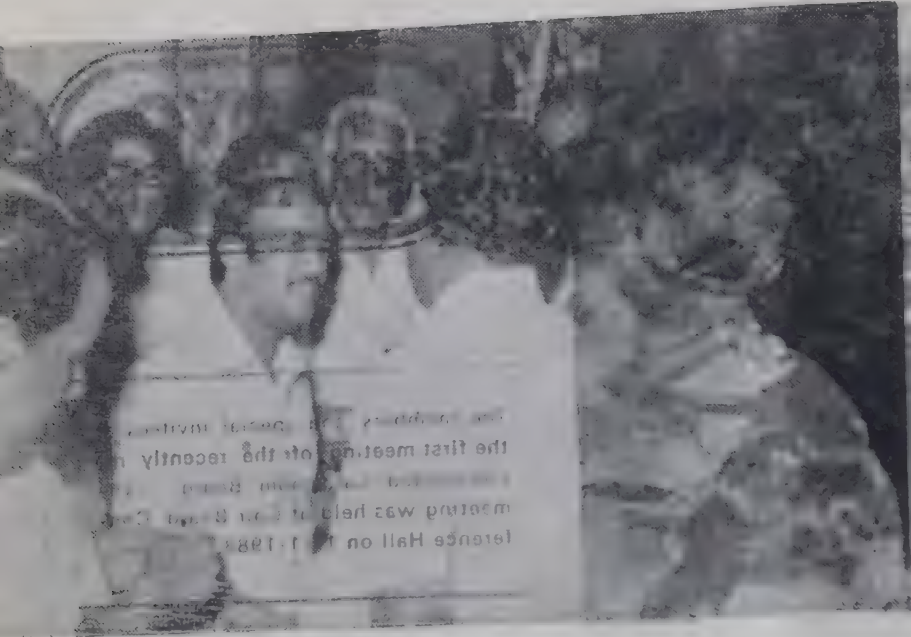
Automatic, semi-automatic and manual vacuumizing/gassing installations are offered to end oxygen contamination. Quality loss is thus minimized in storage of such products as milk powder, liquid eggs, baby foods and the like. In the system, vacuum is drawn to 99.5%, then the vacuum is broken by such inert gases as nitrogen, carbon dioxide or a mixture of them. Storage in such a safe, neutral atmosphere is claimed to arange of perhaps three years. A mixing gas installation is also available.

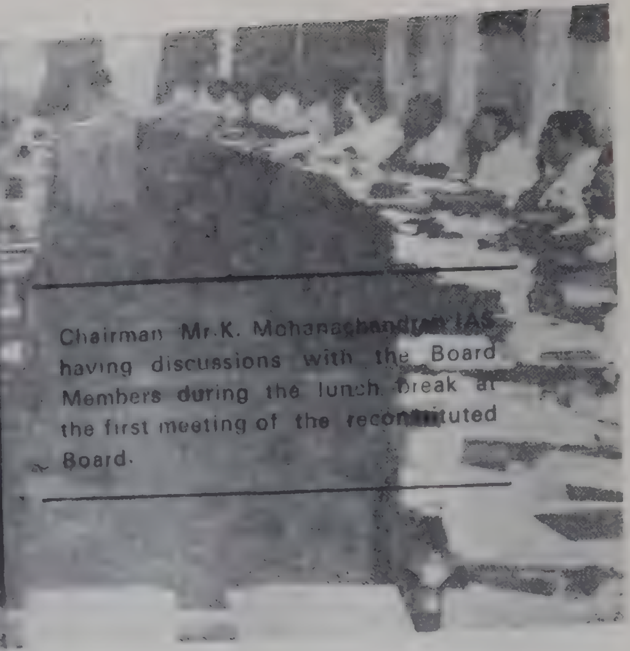
PHOTO FEATURE

The members and special invitees at the first meeting of the recently reconstituted Cardamom Board. The meeting was held at Coir Board Conference Hall on 11-1-1983.

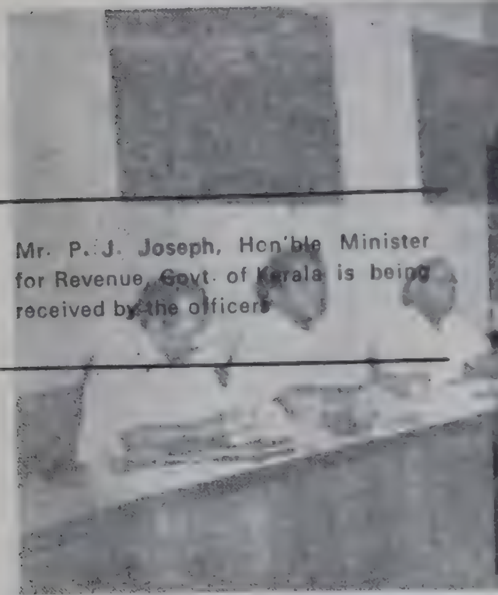
From right to left are Mr K. Mohanachandran, IAS, Mr. Putte Gowda M P., Mr. Dandayudhapani, Mr. Vijayaraghavan M. P., Mr. Jayadevappa, Mr. Jagdischandra, and Mr. Raghavachar, the Cardamom Board Members

From left to right (sitting) are Mr Putte Gowda M. P., Mr. K. Mohanachandran IAS Chairman, Mr. K.S.Skaria Jr.Mrs.MonikaDas M.P., Mr.R.B.Malu. Member. Mr. K. G. Nayar, Secretary. and Mr John M. John Dy. Director at the Cardamom Board meeting

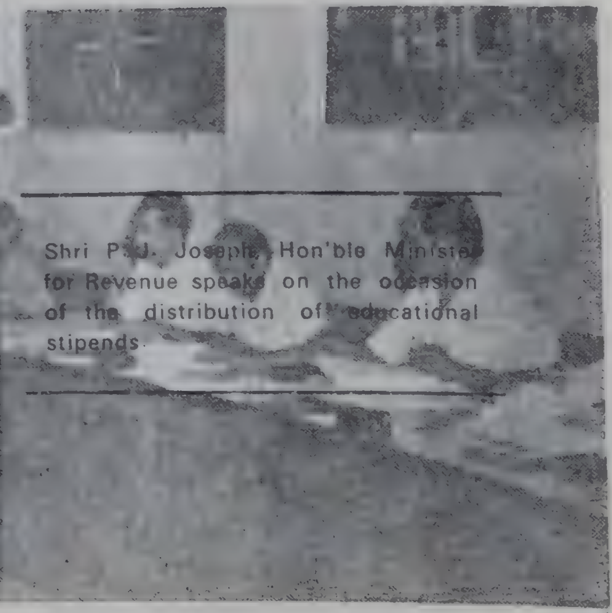




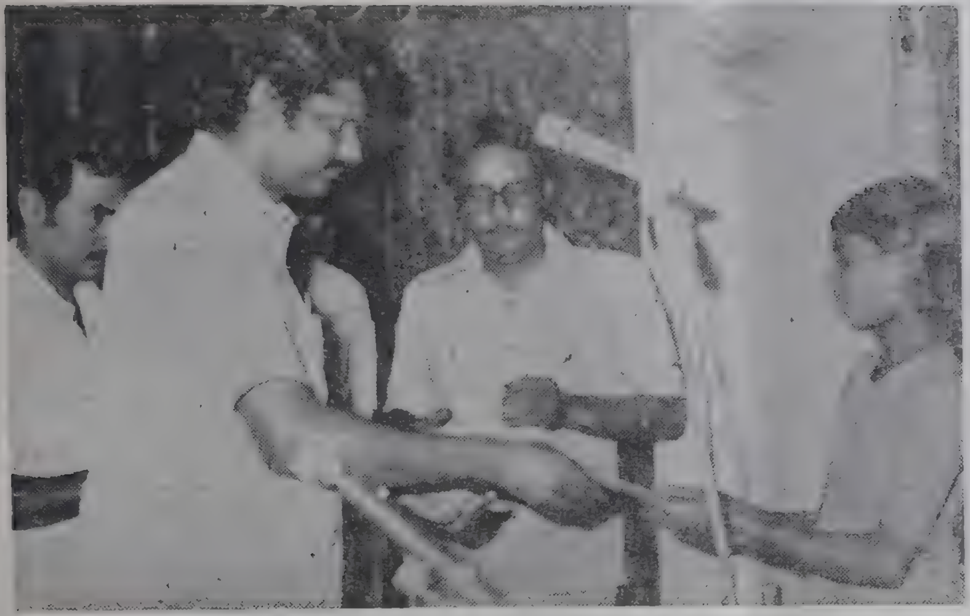
Chairman Mr.K. Mohanachandran IAS having discussions with the Board Members during the lunch break at the first meeting of the reconstituted Board.



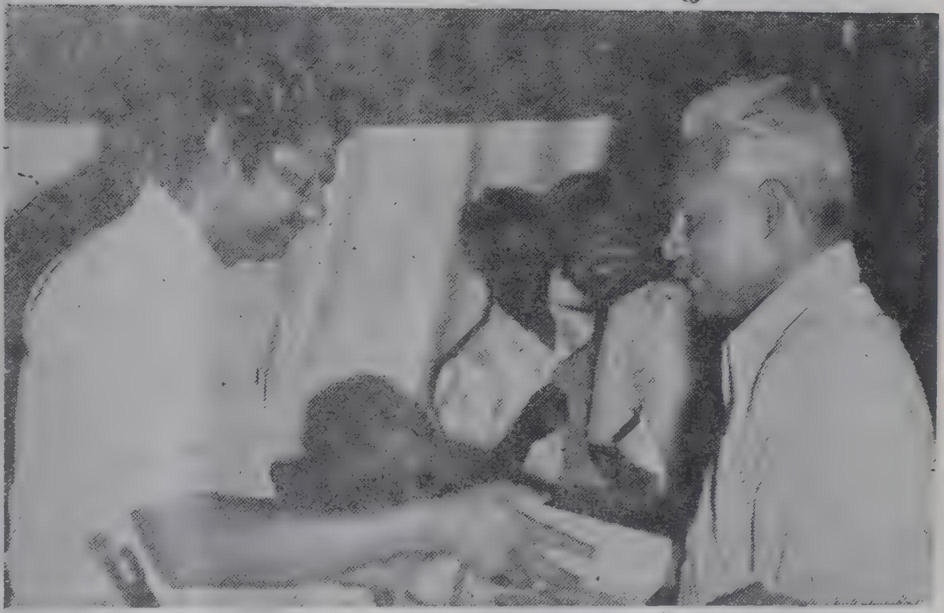
Mr. P. J. Joseph, Hon'ble Minister for Revenue, Govt. of Kerala is being received by the officers



Shri P. J. Joseph, Hon'ble Minister for Revenue speaks on the occasion of the distribution of educational stipends.



Shri P. J. Joseph, Hon'ble Minister inaugurate the distribution of Educational Stipends to the children of Cardamom Estate workers

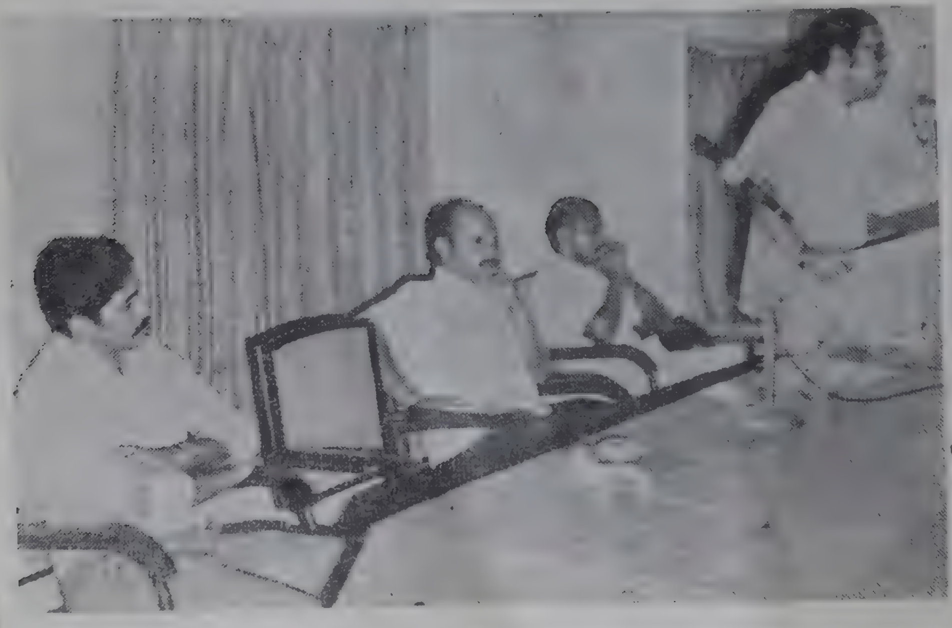


Shri K. P. Chandy, Head Master, Tribal Govt. High School, receives Library Books donated by the Cardamom Board from Shri P. J. Joseph, Hon'ble Revenue Minister.

Shri K. Mohanachandran IAS, Chairman Cardamom Board speaks on the Meeting

The Governor of Sikkim Mr. Homi J.H. Taleyarkhan is being received by Cardamom growers of Kabi area at the Meeting held at Kabi (North Sikkim).

The Governor being received at Kabi by Cardamom Board staff. To his left are Mr. D Radhakrishnan, Assistant Director, Kabi and Mr. T. D. John, Deputy Director, Tadong.



Mr K.G Nayar, Secretary inaugurating the Planters' Seminar at Kattappana.

A view of the audience who attended the Seminar at Kattappana

The inside view of the Cardamom Board pavilion in the Ideal Home Exhibition held at Madras recently.

The visitors are explained by the Board's representatives on the Cardamom Board activities and about cardamom uses at the Board's pavilion in the Ideal Home Exhibition, Madras.

Monthly Statistical Abstract - December 1982

Auction Sales and Prices

The State-wise auction sales and prices of Cardamom during the current year and previous year are given below:-

State	Dec.'82		Dec.'81		Aug-Dec. '82		Aug-Dec.'81	
	Qty (MT)	Ave. price (Rs/kg)	Qty (MT)	Ave. price (Rs/kg)	Qty (MT)	Ave price (Rs/kg)	Qty (MT)	Ave price (Rs/kg)
Kerala	187	163.71	460	114.37	965	160.27	1810	120.39
Tamilnadu	9	154.57	18	89 95	43	139.65	63	92.65
Karnataka	163	161.67	155	95.18	449	147.77	525	93.58
Total	359	162.54	633	109 00	1457	149.18	2398	113.79

It may be seen from the above table that the auction sales during December '82 was less by 274 M.T. when compared to December '81. This is mainly due to the less production during the current season compared to last season.

The cumulative auction sales during August - December was 1457 MT as against 2398 MT during August-December '81 indicating a decrease of 39% in terms of quantity when compared to previous year. The average price realisation was higher by Rs. 35/- per kg during the current year when compared to previous year.

Export

Month-wise provisional figures of export of cardamom during the current financial year with comparative figures for the previous year are given below.-

It is seen from the above table that export both in terms of quantity and earnings has decreased considerably during the current season (April-December '82) compared to the same period of previous year. The main reason for this drastic decline in export was reduction in crop production, lack of sufficient orders from the core Middle East markets due to competition from Guatamala with higher supplies at lower price and consequent availability of stock of Guatemalan cardamom in those markets. The unit value realisation has gone up by Rs. 33.44 per kg during the current season when compared to the same period of last season. The hike in price is mainly due to the significant fall in production.

Month	1982-83			1981-82		
	Qty (kgs)	Value (Rs)	U. Value (Rs/kg)	Qty (kgs)	Value (Rs)	U. Value (Rs/kg)
April	42195	5992441	140.02	278077	32166011	115.70
May	75026	11433006	152.39	97866	10812936	110.49
June	14950	1696977	113.51	120547	13607627	112 68
July	104435	13835246	132.48	112235	14654746	130.57
August	20783	2924509	140.72	79062	10089187	127.61
September	20330	3753632	184 88	117109	14901138	127.24
October	51503	7605284	147.67	131940	17409648	131 95
November	126146	28195373	223.51	468900	65446658	134.92
December	256153	40073498	156.44	354919	47886319	128.91
Total	711521	115514966	162 35	1760655	2269742 0	128.91

AUCTION SALES & PRICES OF CARDAMOM

Centre	December 1982			December 1981			Aug—November 1982			Aug—December 1981		
	Qty Sold (kgs)	Prices (Rs/kg) Max:	Average	Qty. Sold (kgs)	Prices (Rs/kg) Max:	Average	Qty. Sold (kgs)	prices (Rs/kg) Max:	Average	Qty. Sold (kgs)	Prices (Rs/kg) Max	Average
KERALA												
Vandanmettu	138804	341.00	165.31	250539	243.40	115.70	616688	341.00	152.09	1023931	243.40	123 17
Santhanpara	29185	200.10	156.17	70978	147.00	101.74	210511	200.00	144.21	369543	172.30	109.37
Udumbanchola	—	—	—	—	—	—	—	—	—	1273	127.60	113.97
Kumily	15267	260.10	165.74	132492	204.90	119.08	120558	260.10	152.26	382381	226 90	124.60
Kallar	—	—	—	—	—	—	3618	159.00	139.13	—	—	—
Cochin	3751	250.00	155.00	6383	156.00	104.85	13412	250.00	147 20	12061	169.00	106.46
Kajanappara	—	—	—	—	—	—	—	—	—	20860	148.90	110.70
TOTAL (KERALA)	187007	341.00	163.71	460392	243.40	114.37	964787	341.00	150.28	1810049	243.40	120.39
TAMILNADU												
Pattiveeranpatty	8428	207.90	158.00	9765	134.00	98.86	39155	207.90	141.23	37737	153.00	103.04
Bodinayakanur	1182	152.60	130.14	7670	114.50	78.61	4081	152.60	124.50	25105	120.20	77 03
TOTAL (TAMILNADU)	9610	207.90	154.57	17435	134.00	89.95	43236	207.90	139.65	62842	153.00	92.65
KARNATAKA												
Somwarpet	—	—	—	—	—	—	—	—	—	478	95.00	83.24
Mercara	20994	240.50	162.02	4119	158.50	104.49	45160	240.00	147.74	58804	158.50	102.25
Mangalore	19053	185 00	160 51	19801	132.00	97.31	24023	185.00	154.36	68474	132 00	96.23
Saklaspur	113235	250 50	162.35	125333	244 00	94 70	351490	250.50	147.93	377723	244.00	92.17
Sirsi	6723	211.99	154.87	4674	128.99	92.40	20195	211.99	140.79	16135	128.99	86.58
Siddapur	2831	210 99	155.88	928	106.69	87.85	8600	210.99	139.45	3478	106.69	82 53
TOTAL (KARNATAKA)	162836	250 50	161.67	154855	244 00	95.18	449468	250.50	147.77	525092	244.00	93.58
TOTAL (INDIA)	359453	341.00	162.54	632682	244.00	109 00	1457491	341.00	149.19	2397983	244.00	113.79

Source : Reports received from Licensed Cardamom Auctioneers.

Cultivation Operations

MONTH **MARCH**	South-West Monsoon areas (Kerala-Tamilnadu)	North-East Monsoon areas (Tamilnadu)	South-West Monsoon areas (Karnataka)
Primary Nursery	Routine watering, weeding-earthing up and repair of beds-plant protection measures against pests and diseases.	Routine watering - removing mulch from the germinated beds and erecting shade pandals.	Regular watering, plant protection and weeding.
Secondary Nursery	Third round manuring if required - mulching - routine watering and plant protection measures-clearing site, first digging, removing stumps and pebbles for opening next season's secondary nursery.	Routine watering and plant protection measures Repairing beds and earthing up.	Routine watering, plant protection and weeding. If Mite attack noticed, spray wettable Sulphur at the rate of ½ kg in 90 litres water.
Starting of New Plantations	Clearing drains and channels continued–Tracing and laying footpaths and roads continued-Line marking and pegging for digging pits.	Works connected with footpaths, roads and drainage channels continued. Third round weeding in last year's new planted areas.	Line marking. Pegging and digging pits for planting.
Maintenance of Plantation	Thrips control-collection of fire – wood for cardamom curing – second round of maintenance of footpaths and roads, clearing drainage channels etc. continued-Last round harvest continued and completed-tracing, uprooting and destruction of Katte affected plants.	Last round harvest continued. Thrips control - third round weeding and earthing up of the plants continued and completed. Collection of firewood.	Watch and Ward-plant protection measures as warranted.

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PRODUCTION OF CARDAMOM IN INDIA

By C A Jos

As in the case of many an agricultural produce, reliable statistics for the cardamom production in India and abroad have been lacking to a very extent. This is mainly due to the widely scattered nature of plantations and the sensitive nature of the crop which is highly susceptible to changes in climatic conditions. from season to season. Reliable advance estimates of likely production are, in fact. a prerequisite for the formulation of marketing, export and price policies. The National Commission on Agriculture has highlighted the need for preparing ,'Situation and outlook Reports'' in respect of important crops. Such reports, according to the Commission will not only assist the Government in its policy work but will be useful for farmers, traders and exporters. The major objective of this paper is therefore to provide an appropriate factual frame-work inwhich the changing conditions of Indian production can be evaluated The author should have stressed here the vagaries of weather and monsoon but it is obivious to anybody to merit description. With these constraints, the production of cardamom in India has been estimated at different times at different agencies in the past and the author is only making an attempt to update the existing body of information on an analytical basis.

The estimates given above show a wide fluctuation ranging from 2621 tonnes in 1944-45 (in an area of 46805 hectares) to 1524 tonnes in 1959 (in an area of 45072 hectares). The Report on tne Marketing of Cardamom in India, 1963 (AMA series–144) estimated the production of cardamom at the level of 3266 tonnes in the year 1959-60, recording an increase of 26 per cent over 1944–45 production. While the year 1963-64 recorded the output of cardamom at 4130 tonnes, the year 1965-66 witnessed a steep fall in production at 2000 tonnes. This was largely due to the incidence of the plant disease, ·-Katte'' which brought havoc in the plantations followed by drought conditions. After 1965-66, the production of cardamom had undergone violent fluctuations ranging from 2100 tonnes in 1968-69 to 3785 tonnes in 1971–72. After a set back in 1972-73, a recovery was noted in the subsequent years and the production had reached the level of 3000 tonnes in the year 1975-76. Again in 1976-77, it declined to 2400 tonnes only to

TABLE–1

PRODUCTION OF CARDAMOM IN INDIA

YEAR	Quantity (In tonnes)	Source*
1944–45	2621	Report on the production and Marketing of Cardamom in India, 1947, P. 12.
1951–52	1446	Spices Enquiry Committee, 1953, P. 50
1959	1524	Report on the Marketing and Trade in spices in the countries of the E. C. A. F. E. region. U. N. E. S. C. O., 1959, P. 41.

*Directorate of Marketing and Inspection, Ministry of Agriculture, Government of India, Report on the Marketing of Cardamom in India, 1963, p. 7.

INDIAN SOCIETY FOR PLANTATION CROPS

OFFERS THE FOLLOWING PUBLICATIONS

1. PROCEEDINGS OF THE FIRST NATIONAL SYMPOSIUM ON PLANTATION CROPS TRIVANDRUM (INDIA), DECEMBER, 1972

220 pp. Rs. 50-00 (US $ 20-00 or £ 8-00) February, 1974

Contains the full text with discussions of 45 papers read at the Symposium (plus abstracts of 8 other papers and summary of 6 papers presented at the Panel Session). The papers cover all aspects (agronomy and soil science, genetics and breeding., physiology and biochemistry, diseases and pests and processing and technology) of all the plantation crops including spices and condiments (tea, coffee, rubber, cashew, coconut, arecanut, black pepper, cardamom, clove, ginger, coriander etc.)

2. PROCEEDINGS OF THE FIRST ANNUAL SYMPOSIUM ON PLANTATION CROPS

(PLACROSYM I)

(AGRONOMY, SOILS, PHYSIOLOGY AND ECONOMICS)

KOTTAYAM (INDIA), MARCH, 1978

540 pp. Rs. 75-00 (US $ 25.00) June, 1979

Contains the full text of 54 papers read and discussed at the Symposium plus abstracts of 23 satellite papers. It contains six chapters, *viz*, soil fertility evaluation, soil fertility and crop response, soil and water management, crop physiology, inter and mixed cropping and economics and farm management on all plantation crops (tea, coffee, rubber, cashew, coconut, arecanut, black pepper, cardamom etc.)

3. PROCEEDINGS OF THE SECOND ANNUAL SYMPOSIUM ON PLANTATION CROPS

(PLACROSYM II)

(PLANT PROTECTION - ENTOMOLOGY, MICROBIOLOGY NEMATOLOGY, PLANT PATHOLOGY AND RODENTOLOGY)

OOTTACAMUND (INDIA), JUNE, 1979

555 pp. Price Rs. 75-00 (US $ 25) September, 1980

Contains six sections, one each on nematology and microbiology and two each on entomology and plant pathology. The plantation crops dealt with are areca, cacao, cardamom, cashew, coconut, coffee, pepper, rubber and tea. Full text of 72 papers on various aspects together with an abstract, is printed and after the papers in each session the main points emerging in the discussions and future lines of work are summarised.

Available from :

The Secretary
Indian Society for Plantation Crops
Central Plantation Crops Research Institute
Kasaragod 670 124, Kerala, India

rise in the succeeding years reaching the record production of 4500 tonnes in the year 1979-80.

TABLE-2
PRODUCTION AND EXPORT OF CARDAMOM FROM INDIA

YEAR	Production (M. T.)	Export (M. T.)	Percentage Exports over Production
1960–61	3353	2034	60.7
1961–62	3205	2364	73.8
1962–63	3400	2259	66.4
1993–64	4130	2306	55.8
1964-65	2200	1503	68.3
1965–66	2000	1134	56.7
1966–67	2700	1590	58.9
1967–68	2400	1451	60.5
1968–69	2100	1291	61.5
1969–70	2300	1149	50.0
1970–71	3170	1705	53.8
1971–72	3785	2147	56.7
1972–73	2670	1384	51.8
1973–74	2780	1813	65.2
1974–75	2900	1626	56.7
1975–76	3000	1941	64.0
1976–77	2400	893	37.2
1977–78	3900	2763	70.8
1978–79	4000	2876	71.9
1979–80	4500	2636	58.6
1980–81	4400	2319	52.7

NOTE: 1. Export figures for the period 1960-61 to 1963-64 include Big Cardamom, about 300 M. T.

2. Production is for the crop year (September to August.) Export is for the financial year (April to March).

SOURCE: The Cardamom Board, Cochin

TABLE No. 3
World and Indian Production and Export of Cardamom

		1960	1966	1972-73	1979-80
1.	World Production	5400	4800	4700	8000
2.	World Export	2570	2190	2900	5700
3.	India's Production	3300	2700	3000	4500
4.	India's Export	1920	1560	1750	2700
5.	India's Production as percentage of world production	61	56	64	56
6.	Indian Export as percentage of world Export.	75	71	60	47

Sources: 1. Marketing Research Corporation of India, Survey of India's Export Potential of Spices, 1968, Vol. 11 A P. P. B88 and B 92.

2. The Cardamom Board, Cardamom Statistics, 1976, P. 68, and1981 Part II, P. 1.

India occupies the most important place in the world in respect of cardamom production. Regarding the world production, no reliable estimates were available over a period of time. However, the Report on the Marketing and Trade in the countries of E. C. A. F. E. region published in 1959 has estimated the world production (excluding Central American Countries whose production of cardamom was negligible in early fifties) at about 1778 tonnes of which India's share was 85.7 per cent (or 1523 tonnes) followed by Ceylon and Thailand contributing about 8.7 per cent and 5.6 per cent respectively.

According to the estimates made by the Marketing Research Corporarion of India, India's share in the world production had declined to 49 per cent in 1965 and 56 per cent in 1966, as a result of increassed output in Guatemala and the fall in production within the country. * If we look into the production figures in India during the period 1966-67 to 1975-76, the average annual production would work out to 2775 tonnes. Barring the fall in production of cardamom in the year 1976-77, the Indian production increased steadily and the percent level of production of 4200 tonnes (being the average of the production of the last four years) may be taken as the normal level of production of cardamom in India.

The one time importance and the present day problems of India's cardamom production and export can be better understood by looking into the following table.

During the period 1960 to 1972-73, substantial, fluctuations are noticed in production and exports followed by changes in weather conditions, incidence of pests and diseases. The affluence in the oil-rich countries of the West Asia who are the principal consumers of Cardamom has resulted in offering favourable prices and the total world demand has tended to grow at a rate faster than production growth rate. In spite of substantial increase both in the matter of world production and exports over the period 1972-73 to 1979 - 80 the F. O. B. Price (Export Price) has continuously increased from Rs 49.45 per kg. in 1972-73 to Rs. 193.90 per kg.

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* The Marketing Research Corporation of India; Survey of India's Export Potential of Spices, 1968, Vol. 11A, PP. B26, 27.

in 1978–79 and startee declining to Rs. 182.25 in 1979 - 80, Rs. 147.61 in 1980 – 81 and Rs. 130.39 in 1981–82 per kg It can be easily observed that there were conditions of relative scarcities during the period 1972–73 to 1976-79. This will incidently explain the pressure on prices during this period.

The relative level of agricultural prices influences in the long run, the allocation of production resources and hence, the level and pattern of agricultural production. Price relationships affect relative profitability and economic incentives. Relative profitability is a function of the physical productivity of resources in various uses as well as of the relationship among prices of inputs and outputs. The substantial increase in prices since 1972 - 73 was also largely responsiple for about 50 percent increase in the production of Cardamom over this period. However, the unit prices of Cardamom has started declining from the peak level of Rs. 193.90 in 1978-79 to 130.39in 1981-82. It would not be unrealistic to assume that the total world Cardamom trade will show the same tendencies for growth in future too. In fact, the recent developments are indicative of a resentment amongst the consumers for the current price level. The producing countries should not mind a small decline in prices if it can enable them to increase consumption of this vital spice especially in relation to the oil-rich countries of west Asia and new markets elsewhere. Table No. 4 gives details of price movements and production of Cardamom during the period 1972-73 to 1981-82.

Table No. 4.

Year	Production (M. T.)	Export value (f.o.b. value in Rs./kg.)
1972–73	2670	49.45
73-74	2780	63.71
74-75	2900	81.92
75-76	3000	99.88
76–77	2400	152 99
77-78	3900	166.33
78–79	4000	193.90
79–80	4500	182.25
80-81	4400	147.61
81-82	N. A.	130.39

Source : Cardamom Board, Cochin

Yield Rate:–There are several factors which influence Cardamom yield per hectare important among these being the variety grown, the age of plantation and the climatic conditions apart from soil conditions and the topography of the region. The method of raising the plantations (Pure or mixed) and the care bestowed on weeding. mulching, manuring and harvesting also affect the yield rate. Of all these, the most important are the incidence of plant disease and failure of monsoons. The failure of timely rain in adequate measure in any one season adversely affects production not only in that year but also in the subsequent two years or more.

With these constraints, various authorities have estimated the yield rate from time to time. The Report on the production and Marketing of Cardamom published in 1947put the yield per acre between 23 and 45kg. for Mysore type under favourable conditions. Later Surveys conducted and reported in tne Rebort on the marketing of Cardamom in India, 1963, (A. M. A. Series 144) placed the yield per acre at 20 kg. However, enquiries made by the author with certain selected cultivators in 1976 in the Kerala State speak differently. In Idukki district, for instance, the average yield per acre is reported to be varying from as low a figure as 12 kg. In Kallar region to about 35 Kg. in Udumbanchola region and 80 kg. in Vandenmettu. In Palghat district, the average yield per acre is reported to be varying from 40 kg. to 100 kg. in Nelliampatty region. probably because of the young age and better management of the Cardamom plantations. From the above discussion it will be observed that the yield rate per acre has been varyingly assessed by different agencies; but it will not be unreasonable to assume the yield rate at 30 kg. of Cardamom per acre provided the estates are reasonably well maintained and the climatic conditions arefairly normal.

A statisfactory detailed analysis of state-wise- yield rate in respect of Cardamom, unlike many other agricultural commodities, is now quite possible, since adequate and authentic and strictly comparable area and production statistics over a period of time are being made avilable by various agencies.

Table No 5 gives state–wise yield rate of Cardamom in India for the period 1944–45 to 1980-81.

It is observed from the table given that in the year 1944–45, the yield rate was 60.4 kg. per hectare in Kerala 60.8 kg. in Tamil Nadu and 46.7 kg. in Karnataka. In the Year 1956-57 the maximum yield rate was recorded in Karnataka with 73.0 kg. per hectare, followed by Tamil Nadu

Table 5.
State-wise yield rate of Cardamom in India

(Yield per hectare in kg.)

State	1944-45*	1956-57**	1965-66***	1975-76***	1980-81***
Kerala	60.4	43.8	22.4	37.1	55.0
Karnataka	46.7	73.0	38.7	23.0	35.4
Tamil Nadu	60.8	61.2	30.8	37.0	32.1
Average	53.4	55.6	27.5	32.8	46.8

Note : Figures related to 1944-45 and 1956-57 are inclusive of Big Cardamom (Bada Elachi).

Source : * Report on the Marketing of Cardamom in India, Directorate of Marketing and Inspection, Govt. of India, 1963.

** Conclusions and Recommendations of the Seminar on Cardamom, Indian institute of foreign Trade, 1967.

*** The Cardamom Board, Cochin.

with 61.2 kg. and Kerala with 43.8 kg. respectively. In 1965-66 also Karnataka. led the other states in the matter of yield rate with 38.7 kg. per hectare in Karnataka, 30.8 kg. in Tamil Nadu and 24.4 kg. in Kerala. It is reported that the steep decline in the yield rate in Kerala. from 60.4 kg. per hectare in 1944-45 to 22.4 kg. per hectare in 1965–66 was mainly due to the incidence of wide spread "Katte" disease then in the Cardamom estates. Further, this decline in yield rate can also be ascribed to the sudden (statistical) increase of about 33 per cent in the acreage of Cardamom during this period.

As a result of development scheme initiated by the Cardamom Board in the year 1968-69, a definite improvement is noticed in the yield rate of cardamom for the country as a whole. in general. The yield rate of cardamom improved from 22.4 kg. in 1965-66 to 37·1 kg. per hectare in 1975–76 and further to 55 kg. in 1980–81 in Kerala, where as the improvement was from 27.5 kg. to 32.8 kg. and to 46.8 kg. per hectare over the same period for the country as a whole. This increase in yield rate would have been much more pronounced but for the sudden (statistical) increase of about 25.7 per cent in 1975-76 and 29 per cent in 1980-81 in the area under this crop during the period 1965-66 to 1980-81. All this was possible mainly because of the operation of 'Katte' control Schemes, and the progress of other development schemes such as Departmental Nursery Scheme which have been discontinued since 1977-78. However, with the development of the Extension Advisory Scheme and the production of Cardamom seedlings in Cardamom Board's Nurseries it is expected that we may attain higher levels of yield rate in years to come.

THE PROBLEMS RELATED TO THE PRODUCTION OF CARDAMOM IN INDIA :-

The most important problem of the Cardamom industry in India is of increasing productivity. Various factors are at work which are combining to bring down the yield per hectare.

1. Deforestation: Indiscriminate deforestation in and around Cardamom growing areas has assumed greater significance now than ever before. Reckless deforestation exposes cardamom plantations to the ravages of heavy winds and increasing attack of pests and diseases. The ecological factors are of vital importance for the healthy growth of Cardamom plantations. Once the ideal conditions are altered, the land becomes quite unsuitable for Cardamom cultivation and the potentiality of Cardamom culture will be irrevocably lost. Being aware of the importance of this problem the State Forest Departments have been moved in this matter by the Cardamom Board to formulate a forest policy appropriate for the healthy growth of the Cardamom estates.

2 Diseases: Cardamom plants suscepetible to a variety of diseases. The reluctance on the part of the small Cardamom growers for the destruction of the old and disease affected plants and the difficulty of systematic application of insecticides result in low yield per hectare. The recent increase in the yield rate is a clear evidence of the popularity measures developed and propagated by the Cardamom Board.

The Cardamom Board had envisaged a programme of controlling the disease in selected contagious blocks. In order to enlist the active co-operation of the planters free seedlings were supplied as replacement of the destroyed disease-affected plants. In addition, an incentive subsidy of 75 paise for every diseased plant destroyed was

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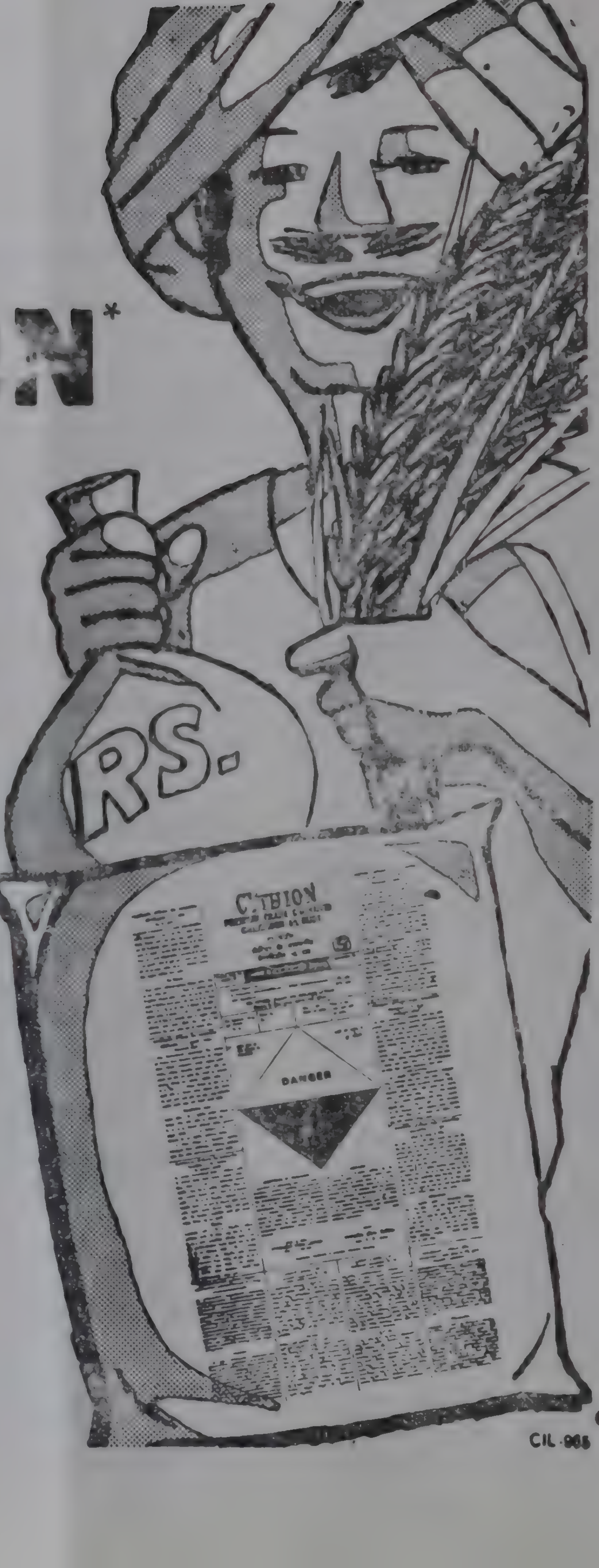
Conclutions and Recommendations of the Seminar on Cardamom, Indian Institute of Foreign Trade 1967.



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given as part compensation for loss of crop sustained.

The facility of free supply of seedlings as replacement for the diseased plants destroyed continued till 1977-78. Though the Katte control scheme of the Cardamom Board was initially sanctioned by the Government of India in November 1968 and has been in operation since then, the effective operation started only from 1979-81. The following table will throw much light on the seriousness and extent of the problem of 'Katte' disease as it gives the details of the area covered and the number of diseased plants uprooted in the different annual operational blocks under the Cardamom Board.

Table-7

The details of the area covered and the number of diseased plants uprooted in the different annual operational blocks since 1970-71

Year of the operational block	Area (in acres)	No. of initial operation	No. of diseased plants uprooted during 1st follow-up	2nd follow-up	3rd follow-up
1970-71	8872	5,28,318	1,16,934	38,706	20,429
1971-72	8243	8,38,900	1.28,202	47,284	21,601
1972-73	5916	9,14.514	1,10,866	30,157	23,516
1973-74	6876	10,09,479	1.37,044	33,637	—
1974-75	5485	7,03,751	1,00,147	—	—
1975-76	5875	7,06,992	—	—	—
1976-77	N.A.	N.A.	—	—	—

Source : Cardamom Board Tenth Annual Report 1975-76.

From the above data it can be seen that it has been possible to bring down the incidence of 'Katte' disease in the scheme operational blocks, through systematic tracing of the diseased plants and their destruction. 'Azhukal' or "Fruit rot" is another disease which is of paramount importance at the present juncture in view of the devastating effect it has in certain areas.

Fertilisers and irrigational methods have a strong bearing on the yield. The system of sprinkler irrigation is one of the most effective means of raising yield per hectare. The Cardamom Board has brought out a Scheme to aid the planters by arranging hire purchase of sprinkler equipments and spare-parts needed for the irrigation purpose. The scheme came into operation from 1968-69. Considering the quantum of finance required for the provisions of sprinkler irrigation in the Cardamom estates, what is provided by the Cardamom Board seems to be quite inadequate. The inadequacy of provision made in the annual budget of the Cardamom Board and the qualifying conditions to be fulfilled by the growers are standing in the way of extending sprinkler irrigation to a satisfactory level.

4. Dissemination of Research Findings : The extension service to disseminate the findings of the studies made in the research stations in India have not been very effective in bringing to the cardamom growers a full knowledge of all the new methods necessary to increase yield per hectare. Many enlightened planters are really making use of the extension services provided by the Cardamom Board.

In a survey conducted by the author in the year 1975, it was found that two out of every ten growers are of opinion that the traditional methods were more remunerative than the new methods of applying chemical manures. It is now much heartening to find that the small growers particularly in the interior parts of the high range are aware of the recent development taking place in the matter of increasing the yield rate probably because of the concerted action programme of the Cardamom Board.

Issue Of Bank Guarantees

The Reserve Bank has advised all banks to adopt the revised model form of bank guarantee form and honour the guarantees issued by them without delay and hesitation whenever they are invoked in accordance with the term and conditions of the guarantee deed. No liability or obligation of banks under the guarantee bonds would be effected for suspended by any dispute between the Government and the contractors/suppliers. Payments under such bonds need not wait till the disputes are decided by a competent court or a tribunal and any payments made by banks to Government departments, etc., under the bonds would be deemed to have been rightfully and lawfully made And no guarantee would be discharged due to any change in the constitution of the bank or the contractors/suppliers.

News Shorts

Budget Provisions

Government of India has approved a provision of Rs. 73.40 lakhs under Non-Plan and Rs. 140.45 lakhs under Plan expenditure for the year 1982-83. A major share of expenditure under Non-Plan is on Market Promotion (Rs. 26.40 lakhs) Publicity & Propaganda (Rs. 7.50 lakhs) and Plantation Welfare Measures (Rs. 8.50 lakhs). Plan expenditure include Rs. 69.95 lakhs on Research and Rs. 55 lakhs on Development Expenditure on Development and Research on Large Cardamom is provided separately (Rs. 9.50 lakhs and Rs. 3 lakhs respectively).

The amount approved for 1983-84 under Non-Plan is Rs. 84.40 lakhs and plan Rs. 170 lakhs. The Provision under Non-Plan, among other things include, Rs.10 lakhs for construction of the Head Quarters Building in Cochin, which is in the final stage of planning.

Cardamom Planters' Meet At Nedumkandam

A Cardamom Planters' Meet and Seminar was held at St. Sebastian's High school, Nedumkandam on 29-1-1983. The Seminar was inaugurated by Shri K. Mohanachandran IAS, Chairman, Cardamom Board and presided over by Shri T. G. Purushothaman Nair, Member, Cardamom Board. Shri C. J. Chacko, Shri Gopala Vadhyar, Shri P. V. Lukose, Shri Thomas Olikkal, Shri O. Divakaran, Shri Eapen Kulathoor, representatives of the planters from different localities spoke on the occasion. The Chairman in his inaugural address urged the planters to maximise the yield and improve the quality of the produce to get higher prices. He promised to look into the demands of the planters in due course. The Chairman explained the new 12 crore Replanting Subsidy Scheme under consideration.

Shri John M. John, Director, Cardamom Board, clearly elucidated the various developmental schemes of the Board to the planters and requested their full co-operation.

The Seminar was headed by Shri P. K. Zachariah, Deputy Director, Indian Cardamom Research Institute, Myladumpara. Dr. Joseph Thomas, Plant Pathologist; Shri Gopakumar and Shri C. Kunhikrishnan Nair; Dr. Karunakaran, Shri Balachandran Nair of Agricultural University, Shri P. C. Varghese and Shri Soundararajan of Bayer India Ltd. conducted classes on various aspects. The planters actively participated in the classes and group discussions and cleared their doubts. About 350 planters participated in the meet and Seminar. The exhibition stall arranged during the occasion was visited by large number of planters and officers.

S. B. I. Loans To Large Cardamom Growers

Shri Homi J. H. Taleyarkhan, Governor of Sikkim distributed 56 sanction letters of S B. I. loans amounting to Rs. 65, 000/- to small and marginal farmers and growers of large cardamom during the 20th S. B. I. Credit Camp at Tintek and Rakdong (East District) in Sikkim.

Addressing the large rural gathering, the Governor said that so far branches of nationalised banks and the credit camps in Sikkim have given loans amounting to over Rs. 2.10 crores, and 70per cent of the loanees have been small and marginal farmers, artisans and small traders who have been given loans upto Rs. 5,000/- at 4 per cent only. Over 2500 small farmers have benefitted within 1½ years.

The Governor added that now the cardamom growers and other farmers and economically weaker sections no longer have to be at the mercy of money lenders, but can avail themselves of the facility provided by the 16 branches of the banks and the Credit Camps which are opened from time to time in ar flung unbanked areas. He urged the loanees to make timely repayments of the oans in order to enable the banks to make more advances.

The Governor mentioned that Rs. 1 crore centrally sponsored Sikkim Cardamom Research and Development Centre with marketing facilities was provided for the welfare of the Cardamom growers of Sikkim who should seek necessary guidance and help from the centre.

The Governor also visited the Cardamom Research and Development Centre at Pangthang and discussed with the Deputy Director, Cardamom Board and Manager S.B.I. ways and means to promote better marketing facility for cardamom, so that the 10.000 growers can derive better price and more income.

The Governor recommended prompt action for initiating cardamom marketing schemes for the benefit of the growers.

With a view to creating awareness among the public, Shri R.K. Ghosh, Branch Manager, State Bank of India, Gangtok explained in detail the facilities available with the bank for welfare of small farmers, entrepreneurs and rural artisans and he assured the public of all co-operation in matters of bank loans and other facilities.

Shri T.D. John, Deputy Director, Sikkim, Cardamom Board in his speech, highlighted the achievements made by the Board and created an awareness among the cardamom growers or the facilities available at the recently set up Cardamom Research and Development Centre at Pangthang and advised the Cardamom growers to fully utilise the facilities available at the centre.

Cardamom Board Participate In Kuwait Fair

Cardamom Board participated in the India Trade Exhibition, organised by the Trade Fair Authority of India at National Hall in the Trade Fair Grounds at Kuwait. The 10-day Fair started on January 10, 1983 attracted large number of visitors. Various grades of Indian Cardamom, cardamom flavoured products like Horlicks, True Biscuits. Nutrine toffee, Complan etc. were exhibited in the pavilion. Photographic panel on the production, export and various end-uses of cardamom were also displayed at the Board's pavilion. Shri E.K. Ninan, Administrative Officer attended the Fair representing Cardamom Board.

Compulsory Use of French Language

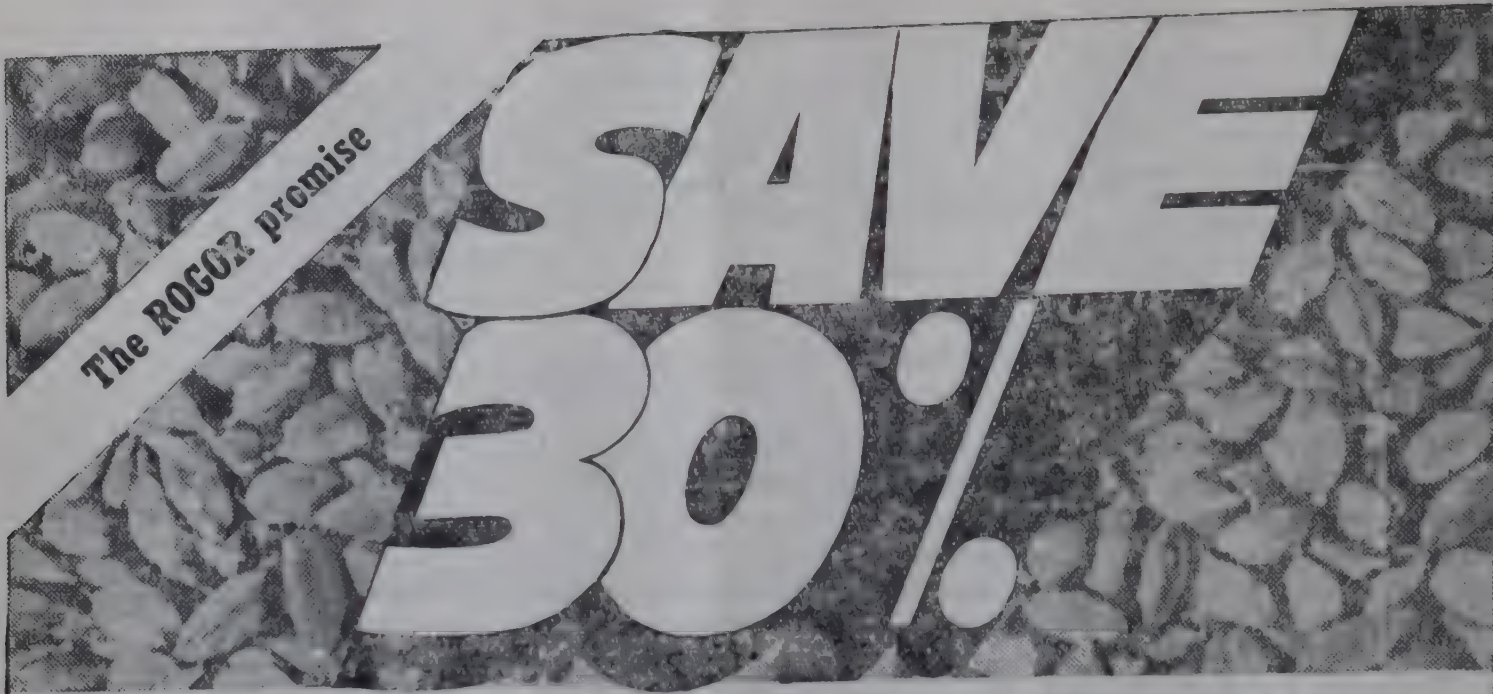
French Government have issued a gazette notification dated the 20th October, 1982 modifying circular of 14th March, 1977 in respect of law of 31st December, 1975 making it compulsory to use French Language in all transactions and imports relating to all goods and services. A copy of gazette notification in French is attached.

Under this new regulation the use of French language is obligatory for all transactions, propositions of transactions and imports of goods and services, as well as for the drafting of all documents namely catalogues, labels, contracts, leaflets, purchase orders, delivery orders, guarantee, instructions for use, insurance certificates, shipment documents and quality attestation.

A Sub-Committee for LargeCardamom

A sub-committee for Amomum Cardamom has been constituted with the following members:

1. Chairman, cardamom Board
2. Vice-Chairman, Cardamom Board
3. Director of Cardamom Development, Cardamom Board
4. Development Commissioner, Government of Sikkim or his nominee.
5. Director of Agriculture, Government of Sikkim or his nominee
6. Two persons representing the cardamom growing interests, one each from Sikkim and West Bengal
7. Two members representing the Cardamom Trading interests, one each from Sikkim and West Bengal.
8. Representative of the Ministry of Agriculture, Government of India in the Board
9. Secretary, Cardamom Board – Member Secretary



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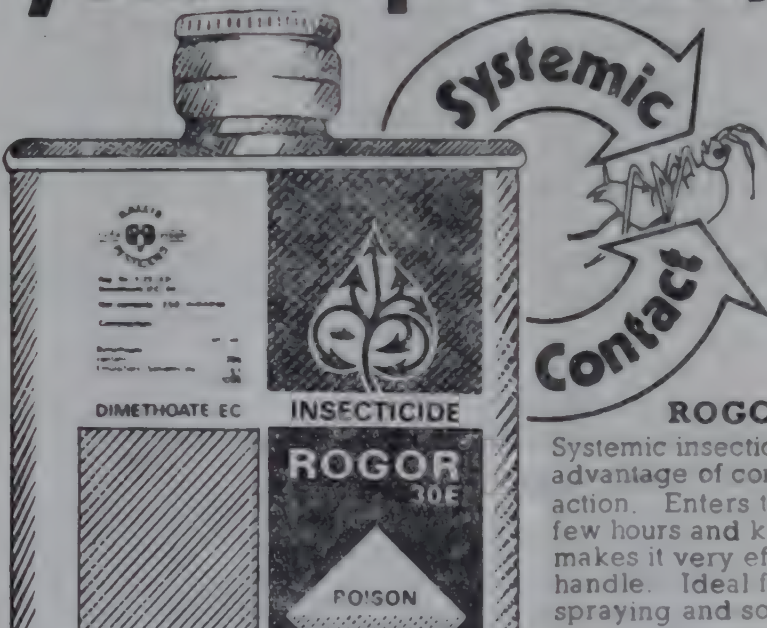

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The sub-committee may study and prepare suitable schemes for the benefit of the cardamom growers as well as suitable market promotion schemes to promote the export of Amomum Cardamom. The sub-committe will remain till at such a time the Cardamom Act is amended to include persons representing the various interests of the Amomum Cardamom industries as members in the Board.

Executive Committee

1. Shri K. Mohanachandran, I.A.S., Chairman
2. Shri K. S. Skaria (Jr.), Vice-Chairman
3. Director, Cardamom Board
4. Agricultural Production Commissioner, Government of Kerala, Trivandrum
5. Smt. A. Makkan
6. Shri T. R. Raghava Achar
7. Shri Xavier Arakal M P. : Special Invitee
8. Shri K. P. Thilakar : Special Invitee

Research & Development Committee

1. Shri K. Mohanachandran I. A. S., Chairman
2. Shri K. S.Skaria (Jr.) Vice-Chairman
3. Director, Cardamom Board
4. Agricultural Production Commissioner, Government of Kerala, Trivandrum
5. Director of Horticulture & Plantation Crops, Government of Tamilnadu Dharmapuri
6. Conservator of Forests (HO), Bangalore
7. Dr. C. K. George
8. Dr. A. L. Jayadevappa
9. Shri K. Sheik Abdul Khader
10. Representative of the Indian Council of Agricultural Research to be nominated by the I. C. A. R.
11. Shri V. S. Vijaya Raghavan M. P. : Special invitee
12. Shri K. V. George, Ex-Director, Cardamom Board Special Invitee

Propaganda Committee

1. Shri K. Mohanachandran I. A. S., Chairman
2. Director, Cardamom Board
3. Shri I. A. Khan
4. Shri V. Devadas
5. (Vacant)
6. Shri T. G. Purushothaman Nair
7. Shri Ramkishan B. Malu
8. Shri D.M. Putte Gowda M.P. Special Invitee

Labour Welfare Committee

1. Shri K. Mohanachandran I. A. S., Chairman
2. Agricultural Production Commissioner, Kerala
3. Director of Horticulture & Plantation Crops, Dharmapuri
4. Conservator of Forests (HO), Bangalore
5. Smt. A. Makkan
6. Shri K. V. George Karimattam
7. Shri R· H. R. Singham
8. Shri K. P. Thilakar
9. Shri K. Sheik Abdul Khader
10. Smt. Monika Das M. P Special Invitee

RBI May Ease Export Credit

The Reserve Bank is considering a number of steps for boosting exports. A review of the policies is being undertaken in view of the need for augmenting the foreign exchange resources of the country.

It is felt that the competitiveness of Indian export industries would have to be increased if they are to penetrate new markets overseas Many countries like Japan, Korea etc, are offering extended credit facilities to overseas buyers. Besides a large number of other facilities like lower interest rates are provided to export industries in Japan and Korea.

In this context, the possibilities of offering flexible interest rates to Indian exporters has also been mooted.

In addition, steps are being conceived for making remittances by non-resident Indians more attractive. It is believed that the incomes of non-resident Indians for their earnings in India would have to be altogether exempted from income-tax

Export Assistance and Development Cell

In order to provide assistance to exporters and give a fillip to export promotion, the office of the Joint Chief Controller of Imports and Exports, Madras has set up an 'Export Assistance & Development cell' (EADC), which will give information

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Cardamom, the queen of spices, needs the balanced nourishment of N P and K to grow into a healthy crop and bring more profits to you.

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on the following items of work:

- i) Dissemination of information regarding Import Policy for exporters and Export Trade Control;
- ii) Various facilities provided by Export Credit Guarantee Corporation, functions of Trade Development Authority etc;
- iii) Scope and function of Export Promotion Councils & Commodity Boards; and
- iv) Taking up issues with the authorities concerned in regard to problems faced by the exporters in the matter of allotment of land, power connections, telephones and telex facilities etc.,

The Export Assistance and Development Cell has come into being with immediate effect. The Deputy Director (Export Promotion) in the Office of the Joint Chief Controller of Imports and Exports, Madras is the Officer-in-Charge of the Export Assistance & Development Cell. Exporters are requested to approach him for information in respect of the above nature of work so that he can render assistance to exporters in the region.

Shipping Tonnage

India's shipping tonnage has crossed the 6 million GRT mark with 409 ships in the merchant fleet. This was stated

STATEMENT ABOUT OWNERSHIP AND OTHER PARTICULARS ABOUT NEWSPAPER "CARDAMOM"

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recently by the Shipping & Transport Minister while addressing the Parliamentary Consultative Committee for his Ministry. He informed the members that no final decision had been taken regarding the merger-cum-restructuring of the Shipping Corporation of India and Mogul Lines. The matter is still under consideration.

Complaints on Non-Availability Of Export Credit

The question of allocation of credit to the export sector and also the necessity of giving prompt attention to the grievances/complaints relating to non-availability of credit etc. of the exporters was considered in the 19th meeting of the Standing Committee on Export Finance of the Reserve Bank of India held on 12th July, 1982. It was inter-alia decided that the Export Finance Division of the Industrial Credit Department of the Reserve Bank of India would extend all possible assistance to the exporting community of specific cases of grievances/ complaints etc.

Members are advised to forward complaints relating to non-availability export credit etc. to the Deputy Chief officer, Reserve Bank of India, Industrial Credit Department, Central Office Building, Post Bag No.10030, Bombay- 400 023.

National Income Increased

The national income at current prices recorded an increase of 19.4% during 1980-81 in comparison to the previous year. The national income at constant prices (1970-71) registered a 7.7% increase during the same period.

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OVERSEAS TRADE ENQUIRIES

Trade Enquiries received during the Board's Participation in Indian Trade Exhibition, London.

1. Shri H. J. Gohil,
26, Kilmuir House,
Eaton Terrace,
London, SWIW 8TJ
Nutrine Sweet
Indian Cardamom products

2. Shri A. S. Panesar,
38, Heston Road, London
Cardamom Biscuits

3. Shri B. Makwana,
6, Bell Lane,
Hendon, London, NW4.
Cardamom, Cardamom toffees

4. Mr. S. C. Sarna,
42, Fern Lane,
Hoston, Middx.
Coffee and toffee products and cardamom.

5. Mr. M. B. Osman,
50, Hans Crescent,
Kriuchisbridge,
London, S. Wixona.
Spices

6. Mr. L. Shanker,
158, Warrington Road,
Abram Weghan Lances.
Cardamom & spices & food products.

7. Mr. V. A. S. H. Kitching,
6, Bourne-way–Hayes,
KENT BR2 7E4
Cardamom & spices.

8. Mr. Kirti Patel,
Unit Y11, Action workshops,
School Road,
London N. W. 10.
Cardamom extract

9. Mr. E, Akoojee,
7 Rita Bldg.,
London SW 8 1JX
Cardamom& cardamom oil

10. Mr. Naresh Nagrecha,
23, Tennyson Av,
London, NW9 9JA.
Cardamom oil & exotic soft drinks.

11. Mr. Himat P Dawada,
137, Ealing Road,
Wtmblly, Middx.
Cardamom product

12: Mr. Praful L shah,
18, Churchill Ave,
Kentone Md.
Cardamom product

13. Mr. M. W. Clarke
Wenman Road,
Trank, Oxfordshire.
Cardamom products

14. Mr. M. E. Vahed,
1, Elmword Avenue
Cardamom products

15. Mr R. K. Kumar,
11, Chestnut Court,
37/39, Uath Road,
Honnslow, Middx., U. K.
All products of cardamom

16. Mr S. S. Mann,
P. O. Box 45,
Slevenage, SGI 2DT
All products

17. Mr. G. Patel,
1143 Greenford Road,
Greenford, Middx.
All products

18. Mr. Salim A Kazi,
37, Erskine Road,
London E176 122
All products

19. Mr. D. P. Jobarputra,
16, Clarendon Road,
Harrow, Middlesex
All products

20. Mr. G. A. Marketing Services,
72, Drakefied Road,
London.
Cardamom

21. Miss. Angel,
R. B. G. Kew Rich Mond,
Survey, England.
All products

22. M/s. K. T. Kubal & Co. P. Ltd.,
47 J—New Lalbang,
Market Sandy—12.
Cardamom

23. Mr. Hari Siwan,
21-25, Cato St. North,
Neachells,
Birmingham B 75 AP.
Cardamom

24. Mr. Chimanlal H Makanji,
15/16/17, Greensbury
Station Parade,
Edgwara, Middx U. K.
Cardamom, bada dana, Cardamom
seeds.

25. Mr. M. V. Rama Rao,
80, Moor Craft Road,
Moselay, Birmingham,
B 13 8Lu
Commodities in general.

26. Mr. N. N. Chamdrani,
48-Kenton Lane,
Kenton-Harrone,
Midd-six 1.
All trade

27. Mr. P. S. Narang,
5, Harlech Gardens,
Heston Middx London.
Items not specified (List of export &
pricelist)

28. Mr. Abraham Varghese,
100 Kilburn Sq,
London N. W. 6.
Exporters details

29. Mr. J. M. Bazaz,
53, A St. Stephen's Garvens,
London - W2 5 NA,
Tel: 01-727-7447
Information on cardamom

30. Mr. W Ramchand Harpalani,
25, Tomas Miller,
London.
Information on cardamom.

31. Mr. T. Stevens,
M. S. D.
Cardamom & commercial spices

32. Mr. P. J. Simnonds,
1 Bex House,
Minories, London EC3N IHP
Cardamom, Guar, Gatti.

33. Mr. K. L. Tanna,
183, VPTON Lane, London E. 7
or
200 Shaftsbury Av.
London W. L. 2.
Cardamom

34. Mr S. D. Kanaan,
381 (A) Bridge Road,
Action London W 395 A
Cardamom

35. Mr Ruparelia P. V.
268, Boundary Road,
London N22 6AJ England.
Cardamom & samples

36. Mr. Thompson P. A. R.
47, Pigly Mansion,
Hammesmithi Bridge, Kd W. 6.
Cardamom

37. Mr. O. P. Verma,
43, Shakespeare Ave, Hayes.
Cardamom

38. Mr Amarjeet Singh Bhansa,
P. O. Box 65,
Maidenhead Berks, U. K.
Cardamom

39. Mr. Vrajlal Mohanlal Cholai,
187 A Ux bridge Road,
London W. 12.
Cardamom

40. M/s T. Choithram & Sons Ltd.,
Choithram House,
Lancelot Road, Wembleeg.
Cardamom

41. Mr. R. S. Chauhan,
398 Lillie Road, London SW6.
Cardamom products

42. Mr. Shakeen S Varn,
17, Rowap Lane,
Old Bury, Warley,
Wast, Midis.
No information

43. Mr. R. Krishnan,
Dayton Business Services Ltd.,
9 Purley Knoll, Purcey.
Cardamom Pricelist & exporters list.

Industry Snippets

Simple Sea-water Desalination Process

A new, simple process for desalinating sea water featuring a low–temperature, low–pressure design based on a combination of thermal and membrane effects, has been developed by a Swedish firm. Called the SU Membrane Distillation System, and said to be much superior to the existing desalination plants, which are complicated, energy-demanding and expensive, it claims operational reliability and low energy, capital and maintenance costs.

The principles of operation are as follows : Warm water is pumped into vertical channels where evaporation takes place. Part of the water is transferred as vapour through a hydrophobic membrane and condenses on the other side of the membrane on a thin plastic film. The plastic film is cooled on its other side with sea water.

The desalination apparatus consists of layer after layer of membranes and condensing film. In addition to evaporation chambers, the equipment (which is mainly of plastic and therefore non-corrosive) contains pumps, pipes and pretreatment filters.

The system is built up in moduels, which can be combined in series to meet the need for larger capacities. Theoretically, any required capacity can be provided, the standard module in large-scale systems producing about $5m^3$ fresh water per day.

Apart from energy for pumping - 1.25 kwh per m^3 of fresh water – the only input needed in water of two different temperatures. The lower–temperature water is used for cooling the condensing films and may be salt, brackish or fresh water. The higher temperature water is the sea water from which fresh water is evaporated and condensed. The warm water should have a temperature of between 40°C and 70°C, while that of the cooler water should be approximately 25°C lower.

Cooling water sources are sea water or water from cooling towers or heat pumps, while warm water can be salty groundwater, waste water from industries and power plants.

The SU Membrane Distillation System is said to be highly flexible and can be used on land and offshore in a number of different sectors in industry and agriculture as well as for domestic purposes. It can also be utilised for producing drinking water.

Fuel Consumption Guide

The Australian Government has released the 1982 edition of the Fuel Consumption Guide, which compares the consumption ratings of new passenger cars.

The guide is intended as a reference for new car buyers who might be faced with confusing claims about new car fuel consumption performances. It assists consumers to select the most fuel efficient cars and, in the process, to contribute to greater fuel conservation.

Data in the guide was provided by the Federal Chamber of Automotive industries from information supplied voluntarily by motor vehicle manufacturers, assemblers and importers. The fuel consumption figures were obtained from tests conducted by the industry on vehicles representative of new passenger car models under conditions set by the Standards Association of Australia and accepted by the motor vehicle industry.

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JAL-1-83

Substitute for Asbestos

Hoechst Chemicals of Frankfurt has developed a synthetic fibre substitute for asbestos, which is known to cause cancer. The new polyacrylic nitril fibre, Dolan I0, is now being marketed.

Calls for a ban on asbestos in the Federal Republic of Germany have increased now the EPA in West Berlin has said several thousand people a year die of lung cancer due to inhaling asbestos fibre. The Bonn Government has repeatedly called on industry and the building trade to dispense with asbestos wherever possible

The development of the new man-made fibre is extremely important, and not only for Germany, especially as the manufacturers say the health hazard is nil. It has already been used to manufacture many products, but a number of others still require tailor-made research and development, Hoechst says

Freezing Tea Leaf

Tea leaves collected from plantations must be processed as soon as possible, otherwise the quality becomes inferior. And because the crop is seasonal, tea factories experience slack and peak periods. In an effort to prolong the pre-processing storage period of tea leaf, experts in Soviet Georgia. a major tea grower, proposed keeping the fresh harvest at a temperature of minus 38-43° Celsius.

An experimental plant was therefore designed for tea leaf freezing. The results were unexpected: the near-complete (96 per cent) freezing of the water contained in the raw tea leaves even improves the quality of the finished product.

Weed Hunter

Egypt's Institute for the Development of Water Resources has successfully bred a fish that can help rid the country of the weeds that are clogging up its rivers and irrigation canals. The fish, imported from China, is a voracious weed-eater and could well succeed where US $ 6.9 million of chemicals and mechanical equipment have failed. Locals have already nicknamed the weed hungry fish 'mabrouk'-the blessed.

Besides being a health hazard these weeds cause tremendous water loss since water flowing slowly through clogged canals escapes through seepage and evaporation. causing a loss of about 3-billion cubic metres of water every year. This is equal to 40 per cent of the water gained annually from the High Dam and could be sufficient to put about 600,000 acres under cultivation. The slow flow is also a major factor in spreading the debilitating water-borne diseases of bilharzia and malaria.

Canned Poison

The practice of storing or even cooking food in empty tin cans, so prevalent among the poor in the Third World, may cause lead poisoning, according to a recent study by the United States Food and Drug Administration.

The lead used to solder the can diffuse into the food once the can is opened and the lead is exposed. The US study revealed that the level of lead in a can of orange juice increases about sevenfold after the can is opened-from 0.05 to 0.36 parts per million, over a five day period. Studies carried out in the US and Britian show conclusively that levels of lead in the blood affect the intellectual and behavioural development of children under five.

In industrialised countries, the biggest sources of lead contamination are paint and soil or dust saturated with lead from car exhausts and industrial effluent. In developing countries, however, the recycling of cans is common place and lead is often used to shine brass cooking pots.

Fibreglass Domes For Gobar Gas Plants

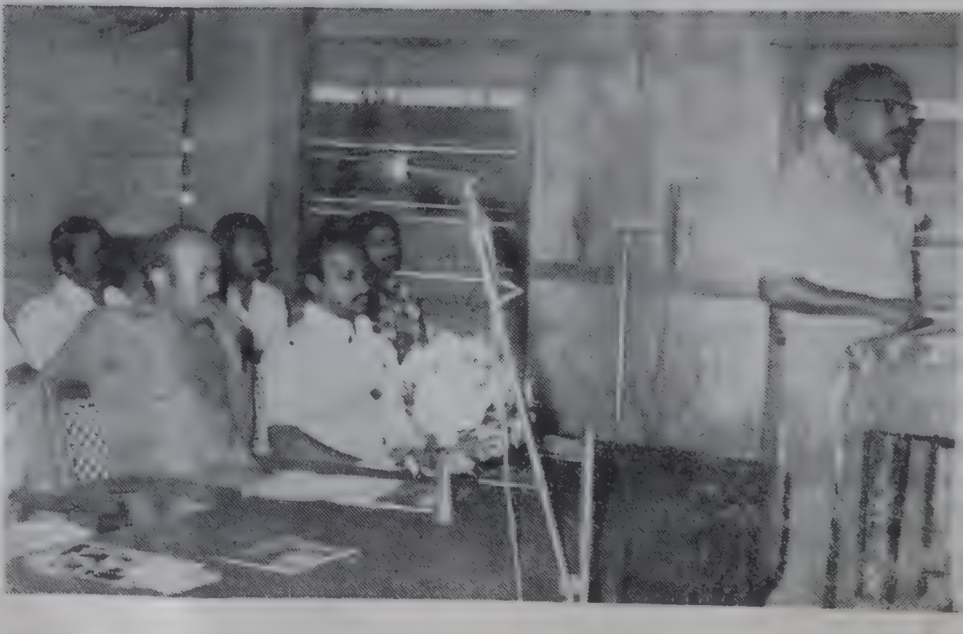
Experiments have indicated the possibility of replacing the steel dome in gobar gas plants with fibre glass domes suitably weighed. A few gobar gas plants are working with fibre glass domes which effectively solve the problem of corrosion, a feature of the steel domes.

About 2,200 plants have been set up in the State so far. About 80 per cent of these are smaller domestic type costing between Rs. 15,000 and Rs. 20,000 depending on the size. The commission has set up only one community gobar gas plant in the State at Guruvayur to utilise the elephant dung available at the temple there.

PHOTO FEATURE

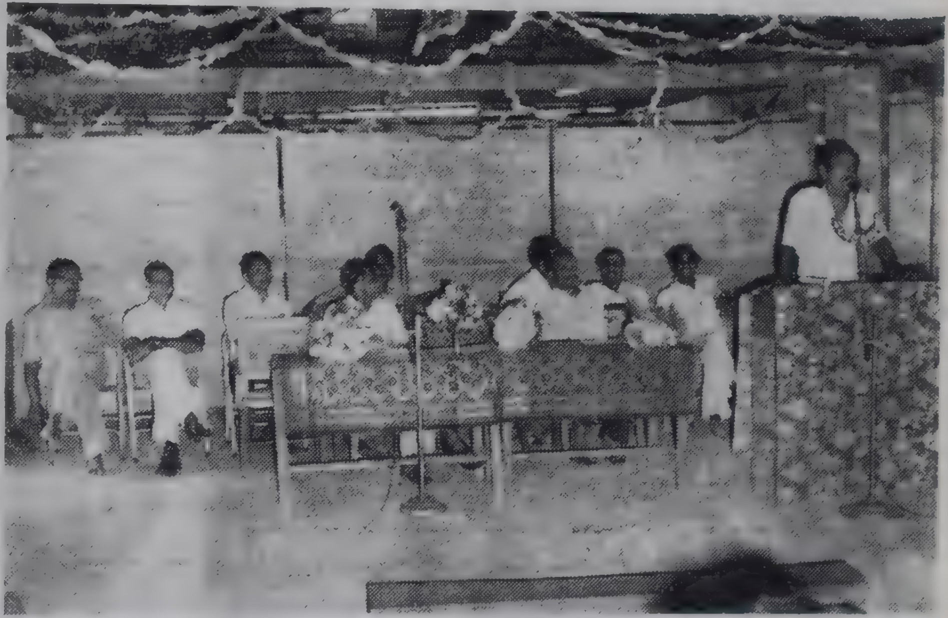
Shri E.K. Ninan, Administrative Officer, Cardamom Board explaining the visitors about cardamom products at the Cardamom Board pavilion in the India Trade Exhibition, Kuwait.

ShriK. Mohanachandran IAS, Chairman, Cardamom Board inaugurates the Cardamom Planters' Seminar at Nedumkandom.



Shri Thomas Mathews, Assistant Director (Eastern Zone), Cardamom Board welcoming the gathering at the Planters' meet at Nedumkandam. Seated behind are Shri K. Mohanachandran IAS, Chairman and Shri John M. John, Deputy Director, Cardamom Board.

Shri T.G. Purushothaman Nair, Member, Cardamom Board presides over the Planters' meet at Nedumkandam. Shri K. Mohanachandran IAS, Chairman, and Shri John M. John, Deputy Director, Cardamom Board can also be seen in the photograph



Dr Karunakaran, Kerala Agricultural University, Pampadumpara, (Cardamom Research Station) speaks at the Cardamom Planters' Seminar at Nedumkandam organised by Field Officers of Udumbanchola Nedumkandam and Pampadumpara

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Monthly Report — January 1983

The latest assessment of field position indicates that the production for the current crop season 1982-83 would be 2900 MT with state-wise break-up as follows.

Kerala	1900 MT
Karnataka	800 MT
Tamilnadu	200 MT
Total:	2900 MT

Auction Sales and Prices:

The state-wise auction sales and prices of cardamom during the current year and previous year are given below.

State	January 83		January 82		Aug-Jan '83		Aug Jan '82	
	Qty. (MT)	Ave. price (Rs/kg)	Qty. (MT)	Ave. price (Rs/kg)	Qty. (MT)	Ave price (Rs/kg)	Qty. (MT)	Ave. price (Rs/kg)
Kerala	122	191.93	220	127.41	1087	154 96	2030	121.15
Tamilnadu	10	176.48	20	103.20	54	146.77	83	95.20
Karnataka	81	172.85	118	119.55	532	151.70	643	98.34
Total	213	183.98	358	123.48	1673	153 66	2756	115.05

It may be seen from the above table that auction sales during January 83 was less by 145 MT compared to January 82. The cumulative auction sales during Aug-January '83 was 1673 MT as against 2756 MT during Aug-January '82 indicating 39% decrease in terms of quantity when compared to previous year. This is mainly due to the less production and hence the poor arrivals in the main auction centres of Kerala, Tamilnadu and Karnataka during the current season compared to last season. The average price realisation was higher by Rs. 39/- per kg during the current season when compare to the last season.

EXPORT:

Month-wise provisional figures of export of cardamom during the current financial year with comparative figures for the previous year are shown below.

It may be seen from the above statement that export both in term of quantity and earnings has decreased considerably during April-January '83 compared to last year (April-January '82). The main reasons for this drastic decline are reduction incrop production during 1982-83, lack of sufficient orders from Middle East due to availability of stocks and severe price competition from Gautemala higher price in domestic markets etc. The unit value realisation has gone uy by Rs. 33/- per kg during the current season compared to last year. The hike in price is mainly due to the significant fall in production coupled with an unusual demand from the North Indian Centres.

Action is being initiated for participation in the forth-coming Hoteres & Foodex Fair, Tokyo, Japan to be held in March 83

Months	1982-83			1981-82		
	Qty. (Kgs)	Value (Rs)	U.Value (Rs/kg)	Qty. (kgs)	Value (Rs)	U.Value (Rs/kg)
April	42195	6992441	140.02	278077	32166011	115.70
May	75026	11133006	152.39	97866	10812936	110.49
June	14950	1696977	113.51	120547	13607627	112.88
July	104435	13835246	132.48	112235	14654746	130 57
August	20783	2924509	140.72	79062	10089187	127.61
September	20330	3758632	184.88	117109	14901138	127.24
October	51503	7605281	147.67	131940	17409648	131.95
November	126146	28195373	223.51	469400	65508771	134 56
December	256203	40082530	156 44	354919	47886319	134 92
January	60073	10569903	175.95	333770	45734979	137.02
Total:	771644	126093901	163 41	2094925	272771362	130.21

AUCTION SALES AND PRICES OF CARDAMOM

Centre	January '83			January' 82			Aug—January 1983			Aug—January 1982		
	Qty. Sold (kgs)	Prices (Rs/kg) Max:	Average	Qty. Sold (kgs)	Prices (Rs/kg) Max:	Average	Qty. Sold (kgs)	prices (Rs/kg) Max:	Average	Qty. Sold (kgs)	Prices (Rs/kg) Max	Average
KERALA												
Vandanmettu	94958	401.00	195.89	149345	186.20	129.41	711646	401.00	157.93	1173276	243.40	123.96
Santhanpara	20589	222.00	172.35	30260	164.10	110.38	231100	222.00	146.72	399803	172.30	109.45
Udumbanchola	—	—	—	—	—	—	—	—	—	1273	127.60	113.97
Kumily	3976	370.50	202.04	38020	180.00	133.29	124534	370.50	153.85	420401	226.90	125.39
Kallar	—	—	—	—	—	—	3618	159.00	139.13	—	—	—
Cochin	2662	226.10	187.02	2929	156.00	124.83	16074	250.00	153.79	14990	169.00	110.05
Kajanapara	—	—	—	—	—	—	—	—	—	20860	148.90	110.70
TOTAL (KERALA)	122185	401.00	191.93	220554	186.20	127.41	1086972	401.00	154.96	2030603	243.40	121.15
TAMILNADU												
Pattiveeranpatty	10170	246.00	177.12	12252	153.30	103.20	49325	246.00	148.63	42989	153.30	103.08
Bodinayakanur	183	178.40	140.84	7746	135.00	81.84	4264	178.00	125.20	32851	135.00	78.16
TOTAL (TAMILNADU)	10353	246.00	176.48	19998	153.30	94.93	53589	246.00	146.77	82840	153.30	93.20
KARNATAKA												
Somwarpet	—	—	—	—	...	—	—	—	—	478	95.00	83.24
Mercara	5326	200.00	177.30	18091	170.00	119.52	50486	240.50	150.86	76895	170.00	105.31
Mangalore	4043	210.00	175.00	24224	157.00	124.84	28288	210.00	157.44	92698	157.00	103.71
Saklespur	70040	250.50	172.44	70111	192 00	117.74	423971	250.50	152.15	447834	244.00	96.17
Sirsi	793	220.90	169.42	4462	176.99	119.91	20988	220.90	141.83	20597	176 99	93.80
Siddapur	188	179.01	168.55	813	151.85	116.70	8411	210.99	139.26	4291	151.85	89.00
TOTAL (KARNATAKA)	80390	250.50	172.85	117701	192 00	119.55	532144	250.50	151.70	642793	244.00	98.34
TOTAL (INDIA)	212928	401.00	183.98	358253	192.00	123.01	1672705	401.00	153.66	2756236	244.00	114.99

Source: Reports received from Licensed Cardamom Auctioneers.

CULTIVATION OPERATIONS

APRIL

MONTH	South-West Monsoon areas (Kerala-Tamilnadu)	North-East Monsoon areas (Tamilnadu)	South-West Monsoon areas (Karnataka)
Primary Nursery	Routine watering and plant protection measures. Weeding. Raking of soil in the interspaces between rows.	Regular watering and routine maintenance. Plant protection measures against pests and diseases.	Routine watering. plant protection and weeding.
Secondary Nursery	Last round weeding. Routine watering and plant protection measures. Second digging in the site for the next season's secondary nursery.	Watering and routine upkeep of beds and pandals.	Routine watering, plant protection and weeding.
Starting of New Plantations	Taking pits for planting in the newly cleared area.	Line marking, pegging and digging pits for planting.	Opening pits continued. Collecting decomposed farm yard manure or compost.
Maintenance of Plantation	Thrips control. Collection of firewood for cardamom curing. Attending to repair and maintenance of curing house.	Thrips control. Collection of firewood.	Spraying Bordeaux mixture Mix wettable sulphur if Mite attack noticed. Opening pits for filling up vacancies.

THE STRUCTURE OF CARDAMOM PRICES - 1

Dr. C. A. Jos

Background:-

Preparation of Cardamom for the market consists of harvesting, drying, cleaning assorting etc. These activities have an important bearing on the quality and price of Cardamom. Cardamom pods are plucked just when they are short of full ripeness, that is before the pericarp turns yellow. At this stage by a gentle touch of fingers the pods are separated from the plant. On the other hand, if they are allowed to ripe fully they tend to split and do not develop a good dark green colour which is an important factor in determining their value. At the same time, immature cardamom pods, when dried, become very light and are quoted at lower prices by the traders. Harvesting is thus considered as a skilled job. "Picking is a job which requires some deftness as well as perception to pick out the ripe and near ripe fruits from the rest. A rough handling of the rhizomes would spoil the crop while indifferent picking of unripe fruits would adversely affect the quality of the produce and loss to the producers"[1].

Cardamom pods contain about 75 percent moisture at the time of plucking. They are, therefore, put to drying after washing in cold water. Drying sheds are normally heated by enclosed heat pipes filled by timber fires, or by oil or electricity. After drying, cardamoms are gently rubbed by hand and winnowed to remove foreign bodies, stalks etc. They are then assorted mainly according to their size and colour. The principal quality characteristics are size-the large sized capsules find the best demand; colour - a strong parrot-green colour commands a premium price provided they are free from blemishes-insect marks etc.

Assembly Centres:

The proportion of different grades obtained from the bulk depends not only on the climatic conditions, incidence of pests and diseases, age of the plantation etc. but also on the general care given to the crop and the precautions taken during the picking and drying of the same. Assembling cardamoms unlike other agricultural produce is bit difficult due to inaccessibility of hills from where the produce has to be brought to markets. The inherent problems in the marketing of cardamom were mainly responsible for the growth and development of planters associations in Kerala and Co-operative Marketing Societies in Karnataka, Cardamom is sold through open auction system at all the assembling markets. There are at present thirteen auction centres for cardamom in India and the quantities passing through these centres for the period 1975-76 to 1980-81 are given below:-

Growth of Auction Centres.

During the early 1950 there was not even a single assembling market in Kerala State. The first one in Kerala started functioning only from 1956-57 at Cochin. Despite the fact that cardamom producing areas are largely concentrated in Kerala, almost all the production of that State found its outlet until 1959-60 in the assembling markets of Tamil Nadu, the principal amongst these being Bodinayakanur, pattiveerampatti, Thevaram, Uttamapalayam etc. In 1960-61 private auction centres were set up by private agencies In Kottayam District of Kerala State.

In the first year of their working (i.e. from August 1960 to July 1961) they were reported to have handled about 58 per cent of the total markets arrivals in all the auction centres of Kerala and Tamil Nadu amounting to about 1964 tonnes. The response of the cardamom producers to these

---

[1] Report of the Minimum wages committee for Employment in cardamom plantation, Kerala, 1959 p.11.

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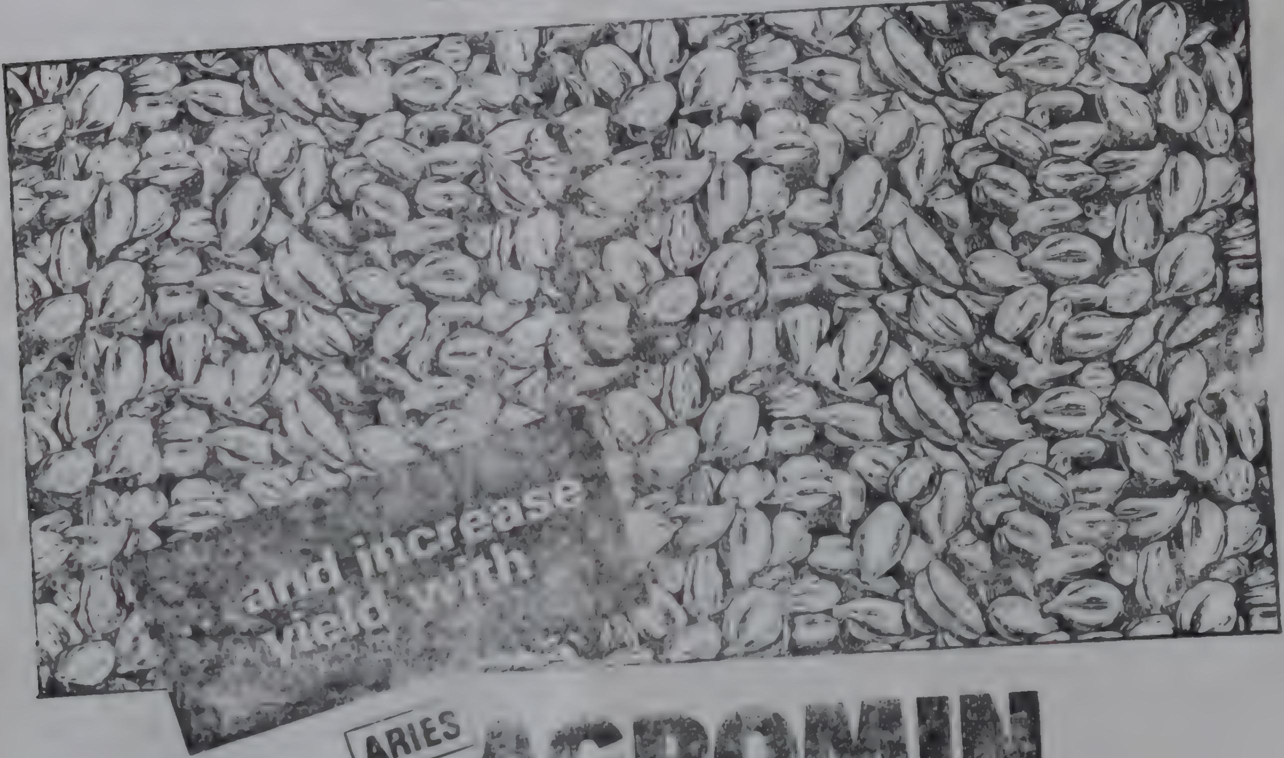

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G ant.44.77

TABLE No. 1

Sale of Cardamom at Auction Centres in India.

Sl. No.	Auction centres	1976-77 (M.T)	1977-78 (M.T.)	1978-79 (M.T.)	1979-80 (M.T.)	1980-81 (M T.)
1.	Vandanmettu	629	1839	1593	1745	1725
2.	Santhanpara	99	198	463	365	501
3.	Kallar	52	117	159	80	30
4.	Cochin	12	32	27	25	22
5.	Udumbanchola	10	115	107	4	15
6.	Parathodu	—	—	68	6	—
7.	Kerala (Total)	802	2301	2417	2225	2293
8.	Pattiveeranpatty	113	156	184	181	76
9.	Bodinayakanur	—	—	42	90	67
	Tamil Nadu (Total)	113	156	226	271	143
10.	Saklespur	320	416	566	497	699
11.	Mercara	49	75	24	61	54
12.	Mangalore	3	45	81	61	154
13.	Sirsi	5	4	10	9	12
14.	Mudigere	—	—	29	—	—
	Karnataka (Total)	377	540	710	628	919

Source: Cardamom Board, Cochin.

auction centres had been very encouraging firstly due to their proximity to the producing areas and secondly due to the market public with the result that the assembling market in Tamil Nadu are now confined to Pattiveeranpatti and Bodinayakanur. During the period 1967–68 to 1978-79, there was no functioning of an auction centre at Bodinayakanur with the exception of the year 1971-72 when there was an unprecedant fall in the cardamom (average) prices from Rs.50.76 to Rs.29.08 per Kilogram.

At auctions, licensed cardamom dealers bid competitively for individual lots ranging in size 50-300 Kgs Lot size is determined by the volume available from individual plantations.

There are about one hundred dealers licensed by the Cardamom Board, who bid at auction. The vast majority of these people are buying cardamom meant for export handled by about a dozen dealers. Even among these limited number of dealers there is heavy concentration of the intake for purposes of exports which means that there is monopoly group in the export trade of cardamom. It is reported that hardly a half a dozen people account for 70 per cent of all exports. In addition, there are about 900 dealers, registered by the cardamom Board, who are mainly concerned with wholesale/retail trade and do not normally participate in auctions.

It is interesting to note that despite the fact that cardamom producing areas are largely concentrated in Kerala State almost all the production of that State found its outlet until

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2. Report on the Marketing of Cordamom in India (Revised Edition, 1963 p-32)

1959-60 in the assembling markets in Madras State, the principal amongst these being Bodinayakanur, Pattiveerampatti, Thevaram, Uttamapalayam, Pannaipuram, Kombai, Cumbum and Gudalur' [2] The produce of Karnataka is mainly assembled in markets within the State, the principal assembling centres being Saklespur, Mercara and Mangalore. Assembly markets developed in the recent past at Vandanmettu, Santhanpara and Kallar now attract bulk of the cardamom produced in the Kerala State.

Vandanmettu in Kerala, Pattiveerampatti in Tamil Nadu and Saklespur in Karnataka have now emerged as the most important assembling centres of cardamom in India.

Preparation for the Market.

By and large the producers and/or itinerant dealers only clean the produce before taking it to the market. In some of the assembling markets mainly at Pattiveerampatti and Vandanmettu, some of these producers sort out the produce on the basis of size. The bigger planters and those commission agents who undertake drying of cardamom on behalf of producers sort cardamoms generally into three or four grades mainly on the basis of size and colour. Others buy in bulk the produce irrespective of the size on the basis of the colour and other general characteristics viz. presence of 'blacks', 'splits', 'lights', 'seed', "husk' etc. It is reported that whenever the producers or itinerant dealers sell their produce on the basis of quality factors and trade descriptions they have been getting better prices than those who do not do any kind of sorting. This kind of sorting is far from what is technically called as 'grading'. At the whole sale markets the trading is done on some fairly well defined grades which vary from centre to centre. In view of the appreciable fluctuations in production and climatic factors from year to year and also because of numerous trade descriptions (grades) it is difficult to precisely indicate the general grade out turns under each trade description.

Domestic prices:

There have been fluctuations in the prices of cardamom dependent mostly on the pattern of production in the country. Depending on the colour, size of the capsules, weight (which is invariably assessed by the merchants by holding the cardamom in their palms) and the quantity put up for sale at the auction centres, the price is determined. when the cardamom is sold in open auction the biggest bidder gets the lot. Merchants grade the cardamom according to the specifications of the importers or on the basis of certain samples. It is not unusual that the prices for the same grade specification varies from dealer to dealer. Subject to these constraints and the back ground information provided elsewhere an attempt is made to study price fluctuations over time so as to determine trends over long periods or variations during different seasons at different centres of the year. Sales and weighted average prices of cardamom at different auction centres during the period 1971-72 to 1980-81 are given in Table No. 2.

It will be observed that the average price at Vandanmettu stood that highest at Rs.81.56 per kilogram as against Rs.41.94 at Cochin the lowest in the year 1970-71 as far as Kerala markets are concerned. It is interesting to note that Cochin offered the highest price only in the year 1976-77 during the period in question. The average price at Cochin in the said year was Rs.172.60 per kilogram whereas it was Rs.164.20 for Kerala, Rs. 143 09 for Tamil Nadu and Rs.145.04 for Karnataka on region-wise basis. In the auction centres of Kerala, Vandanmettu ranks first with an average of 72.45 percent of the cardamom handled in the markets of Kerala during the period 1970-71 to 1980-81. If we are to take the average share of Vandanmettu for the last five years (1976-77 to 1980-81), it would be 75.6 per cent of the cardamom handled by Kerala auction centres. Till the year 1970-71 the Vandanmettu could attract only about 50 per cent of the cardamom put in auction in Kerala.

Price Differentials at Auction Centres

An important point to be noted in this connection is the price variations in different assembling markets/auction centres in the same year. One of the principal reason for this phenomenon is that the commercial grades differ widely even from trader to trader in the same market. Another reason might be wholesalers' preference which encourages price differentials particularly between superior types of cardamom. The price differentials are also influenced by the variations in the forces of demand for and supply of different grades which would be varying from month to month, nay from week to week and from day to day. Variations in export prices (.f.o.b) are very well reflected on auction prices at different centres. Under these circumstances, different auction centres are quite likely to register different prices showing the degree of competitiveness and perfection. This is the basic reason for the sucess of the Vandanmettu auction centre in comparison with the other auction centres of Kerala. The same is true for the past failure of the auction centre at Bodinayakanur of Tamil Nadu. In addition to this, the proximity of the auction centres to those of the planters, and the restrictions imposed by the State Sales Tax and agricultural income Tax authorities on the exit of cardamom from Kerala State are said to be the causes for this diversion of arrivals in favour of auction centres of Idukki Dist. However, the produce of Karnataka is mainly assembled in markets within the State, the principal assembling centres being Saklespur, Mercara, Mangalore and Sirsi.

Another interesting feature to be noted in this connection is the increasing arrival of cardamom at the auction centres. Table No.3 given below illustrates this tendency beyond doubt.

Table No. 3

Sale of cardamom at auction centres in Kerala, Tamil Nadu and Karnataka together with production. Figures and the weighted average prices.

Year	Sale of cardamom at Auction Centres (M. T.)	Production (M. T.)	Percentage at auction sales Centres.	Weighted average prices per/kg.
71–72	3024	3785	80	29.08
72–73	2048	2670	77	49.70
73–74	1728	2780	62	60.05
74–75	1910	2900	66	76.24
75–76	2174	3000	72	86.45
76–77	1291	2400	54	156.75
77–78	2997	3900	77	134.41
78–79	3353	4000	84	166.42
79-80	3123	4500	69	134.88
80-81	3356	4400	76	98-92

It can be observed from the table given above that the Sales of Cardamom at auction centres was the minimum when the production was also at the minimum level. If we are to be guided by the average of production and sale of cardamom at the auction centres for the decade, the auction centres attracted 72 per cent of the cardamom of the average production of 3434 tonnes. This is in good evidence of the fact that the cardamom marketing is fairly well-organised. In the years 1971-72 and 1978-79 when the level of production reached new peaks, the share of cardamom reaching auction centres rose to 80 per cent and 84 per cent respectively. Curiously enough, the year 1971-72 witnessed a crash following a sudden increase in production at 3785 tonnes while the year 1978-79 fetched the highest price for the cardamom prices with an increasing production trend reaching 4000 tonnes in 1978-79. In the year 1979–80 following an increase of 500 tonnes in the cardamom production the weighted average at auction centres price declined from Rs.166.42 per kg. to Rs.134.88 per kg. It is also important to note that the arrivals of cardamom at the auction centres also declined to 69 per cent of the total production in the same year. Again in the year 1980–81 with a further decline with production by a marginal quantity of 100 tonnes, the weighted average price at the auction centres declined to the level of Rs.98.92 per kg. a steep fall of about 27 per cent followed by keen competition from Guatemala. However, this situation compelled the cardamom growers to reach the auction centres with 76 per cent of their total produce.

From the foregoing analysis two important points are very clear: (1) When the prices tend to be maximum or minimum during a particular year over a period of years and when the production reaches new peaks the auction centres attract the maximum out put of cardamom. (2) When the production declines beyond a level, a greater quantity of cardamom moves to the different markets without entering the auction entres. During the period 1971-72 to 1980-81, the year 1976-77 recorded the lowest level of production, at 2400 tonnes of which only 1291 tonnes entered the auction centres. Thereafter, when the production of cardamom improved to an average of 4200 tonnes a year, the share of cardamom reaching the auction centres exceeded 76 per cent on an average.

Table No. 2

Sales and Weighted average prices of Cardamom at different Auction Centres during the period 1971-72 to 1980-81.

S. No.	Auction Centres	1971—72		1972—73		1973—74		1974—75	
		Sales (Kgs)	Average Price (Rs/Kg)	Sales (Kgs)	Average Price (Rs Kg)	Sales (Kgs)	Average Price (Rs/Kg)	Sales (Kgs)	Average Price (Rs/Kg)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Vandanmettu	1376654	30.22	996203	56.12	870219	62.22	1111705	78.61
2.	Santhampara	477039	29.26	242213	52.26	172247	54.88	294609	71.87
3.	Kallar	73152	31.81	36249	48.99	27457	50.93	44459	69.50
4.	Cochin	20109	26.47	35112	48.60	2615	51.84		—
5.	Pampupara		—	—	—	—	—	—	—
6.	Udumbanchola	50175	35.26	16977	50.89	23443	51.85	19546	74.64
7.	Nedumkandam	117260	33.69	16689	52.64	—	—	—	—
	Kerala (Total)	2114389	30.33	1343443	54.93	1095981	60.54	1470319	76.93
8.	Pattiveeranpatty	358464	25.91	215632	43.30	133613	56.80	98723	70.06
9.	Bodinayakanur	3074	23.36	—	—	—	—	—	—
	Tamilnadu.(Total)	361538	25.88	215632	43.30	133613	56.80	98723	70.06
10.	Saklespur	377340	27.38	373401	37.13	394518	59.62	283025	75.71
11.	Mercara	144700	24.13	90635	42.32	94045	61.62	50288	72.58
12.	Mangalore	21284	23.95	21137	39.59	8622	55.93	4550	65.81
13.	Sirsi	5096	20.70	4099	30.39	1109	45.38	2994	69.89
	Karnataka (Total)	548420	26.33	489272	38.14	498294	59.83	340857	75.06
	GRAND TOTAL	3024347	29.08	2048347	49.70	1727888	60.05	1909899	76.24

S. No.	Auction Centres	1975-76		1976-77		1977-78		1978-79		1979-80		1980-81	
		Sales (Kgs)	Average Price (Rs/Kg)	Sales (Kgs)	Average Price (Rs/Kg)	Sales (Kgs)	Average Price (Rs/Kg)	Sales (Kgs)	Average Price (Rs/Kg)	Sales (Kgs)	Average Price (Rs/Kg)	Sales (Kgs)	Average Price (Rs/Kg)
1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1.	Vandanmettu	1129442	92.52	628657	166.48	1839232	146.21	1593040	183.07	1745166	142.63	1724531	112.15
2.	Santhampara	272721	81.14	99037	156.16	198290	126.82	462698	170.40	365390	138.57	501051	98.14
3.	Kallar	60030	76.75	51935	150.97	116607	120.66	159287	164.91	80154	146.57	29675	81.37
4.	Cochin	13617	89.35	11555	172.60	31506	128.35	26690	171.92	24618	121.64	21712	102.71
5.	Parathode	—	—	—	—	—	—	68160	177.32	6049	177.32		
6.	Udumbanchola	56877	82.13	9732	159.50	114811	137.23	106700	172.87	3563	163.58	15085	98.43
	Kerala (Total)	1532687	89.47	800916	164.20	2300446	142.55	2416575	178.71	2224940	141.98	2292055	108.51
7.	Pattiveeranpatty	145161	81.23	112855	143.09	156046	116 61	183978	140.86	180516	112-09	76482	86.86
8.	Bodinayakanur	—	—	—	—	—	—	41905	119.32	90478	116.47	67186	62.46
	Tamilnadu (Total)	145161	81.23	112855	143.09	156046	116.61	225883	136.86	270994	113.55	143668	75.45
9.	Saklespur	399768	79.74	320486	144.71	416144	104.84	565508	133.15	496735	119.24	699414	77.99
10.	Mercara	89563	74.57	49392	147.90	75493	97.48	24486	143.39	60771	125.17	54308	81.39
11.	Mangalore	5216	67.64	3314	137.10	45128	118.20	80848	140.09	61148	110.24	154262	81.33
12.	Sirsi	2050	77.57	4525	135.35	4172	105.51	10493	126.28	8808	118.37	12205	72.85
13.	Mudigere	—	—	—	—	—	—	29463	128.09	—	—	—	—
	Karnataka (Total)	496597	78.67	377717	145.04	540937	104.93	710798	133.98	627462	118.93	920189	78.68
	GRAND TOTAL:	2174445	86.45	1291488	156.75	2997429	134.41	3353256	166.42	3123396	134.88	3355912	98.92

Source : Cardamom Board, Cochin.

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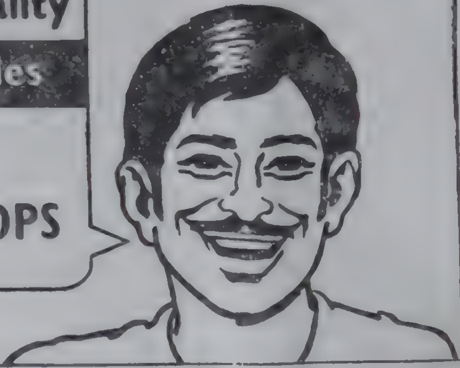

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15-312 (812)

Industry Snippets

Survey Instrument For Ships

An Australian scientist has developed an automated instrument which accurately positions surveying vessels in near-shore survey operations.

The instrument, called an Anglescan, includes a scanning laser which is reflected off several targets on shore.

The signal provided by the targets is picked up by the instrument which automatically measures the angle between the points. The information is then fed into a microcomputer which provides the position of the ship and the direction in which it is travelling.

Though the instrument had been designed for inshore survey work it can be used for other purposes such as assisting the docking of large tankers.

Magnetic Probe Flowmeter

A magnetic probe flowmeter Series 100 is available from Encon Systems of Madras, with a unique-operating principle proven to be reliable and accurate.

The probe has a non-position, sensitive design with no moving parts, no electronics and allows remote installation up to 100 ft. from the transmitter. It can be used on pipes from 3/4 to any size and is ideal to measure difficult fluids such as slurries and corrosive liquids.

Diarrhoea Drugs Withdrawn

The Swiss pharmaceutical firm Ciba-Geigy has decided to take its oral diarrhoea medications, Entero-Vioform and Mexaform, off the world market more than 10 years after first being taken to court by patients alleging harmful side effects. The medications contain the controversial drug clioquinol.

Entero-vioform and Mexaform are banned in Britain and many other developed nations. But Ciba-Geigy has continued to sell them elsewhere. The case has become a cause calibre among critics of pharmaceutical marketing. Several western countries — including Ciba's home, Switzerland -- permit clioquinol's use as a travellers diarrhoea preventative — despite a claim in Lancet in 1977 that proof of its efficacy "did noi withstand critical examination". In the Third World, Enterovioform and Mexaform are sold widely over the counter. Package instructions recommend use for non-specific biarrhoea, for which the company has admitted the drugs' ineffectiveness since 1976.

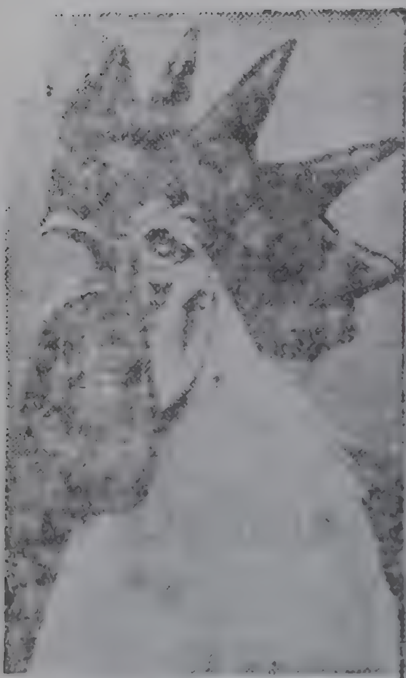
Ciba-Geigy says the recall comes "In light of the most recent changes in medical opinion". This includes a recogeition that oral fluid and electrolyte replacement is usually more effective. The World Health Organisation has opposed drug treatments for diarrhoea since 1976.

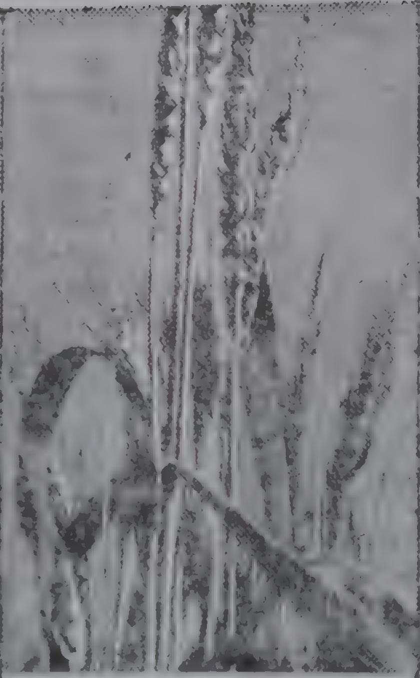
Protein Feed From Farm Waste

Pilot testing of new biotechnological process that is capable of converting much of the world's farm and forest industry wastes to animal feed supplement has begun in Canada with the official opening of a one tonne per day pilot plant in Vancouver.

Designed and built by Envirocon Ltd. and making use of a patented process developed at the University of waterloo in Ontario, the plant converts one tonne of waste materials into half a tonne of protein-rich supplement each day. The Vancouver plant uses wastes from a pulpmill as raw material but the process can also convert a wide variety of agricultural waste materials including cornstover, rice husks, fruit pulps, cassava and bagasse.

The plant makes use of a process in which a microbial life from--a fungus-- is used to convert the waste material into a protein substance which is suitable as an animal feed supplement.





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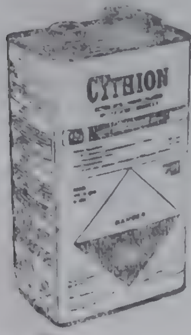

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CIL-374

Coffee and Tea Whiteners Developed

Whiteners, for use as substitutes for milk in tea or coffee, have been developed by Central Food Technological Research Institute based on casein and groundnut protein. As convenience products, there are free-flowing with instant dispersibility in a hot brew. The beverage whitened by these has no off-flavour, or greasy after taste. With the added advantage of a good shelf life, the whiteners have great potential in catering establishment as well as in households for daily use in coffee or tea. A low rate of usage is required for this product, i.e. one kg. of whitner to make about 200 cups of coffee/tea.

To prepare whiteners vegetable fat, protein (casein or groundnut protein) and buffer salts are blended and homogenized. After the addition of sugar and other ingredients, it is prepared into a concentrated emulsion and finally subjected to vaccum-shelf drying. The product is packed in bottles. It has a composition of 42-45 percent fat, 40-45 percent sugar and 10-12 percent protein.

The process for the preparation of whiteners from casein is being released through National Research Development Corporation, New Delhi, for commercial utilization.

Solvent to Extract Food Flavours

Work done in the Regional Research Laboratory, Trivandrum showed that extraction efficiency of ethyl acetate to get oleoresin is as good as ethylene dichloride both in yield and quality. Though the yield has a marginal increase when acetone is employed as a solvent, ethyl acetate is better than acetone for extraction of colour in chilli.

Studies carried out by the scientists at Trivandrum revealed that ethyl acetate can also be used in place of ethylene dichloride. In this way, possible hazards from the use of ethylene dichloride can be eliminated. Moreover, when ethyl acetate is used as a solvent in extracting oleoresin, it is found safe for preparation of food articles.

(Continued on page 18)

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(It pays to grow and export all items of spices)

Fairs and Exhibitions

CARDAMOM BOARD IN SAUDI FOOD '83

Cardamom Board participated in the Saudi Food '83 held in Riyadh, Saudi Arabia from Fubruary 13-17, 1983. The 5-day Fair was officially inaugurated by Mr. Tawfik Ibrahim Tawfik, the Deputy Minister for Supply, Ministry of Commerce, Government ot Saudi Arabia, on Sunday the 13th February. More than 300 exhibitors representing food equipment and catering business all over the world participated in this largest Fair in the Middle East. This was the second food equipment and catering show organised at al-Dhiafa Exhibition centre Riyadh. The Fair was a part of regular series of exhibitions and shows staged at the above exhibition centre and was expected to be followed by Saudi agriculture, Saudi business, Saudi education, Saudi build, Saudi industry etc.

From India, other than the Cardamom Board, the only participant in the Goverment sector was Tea Board of India.

The Cardamom Board pavilion was a centre of attraction to a

COMABRA CIA DE ALIMENTOS DO

An Arab visitor, delightfully looks at a garland made of cardamom capsules at Saudi Food '83 Exhibition.

At the close of the exhibition, the exhibits and the food items left over were donated to the Ministry of Commerce for distribution to the poor Saudi population. Mr. K. G. Nayar, Secretary represented the Cardamom Board at lhe Fair.

Mr. K. G, Nayar, Secretary. Cardamom Board with Dr. Ibrahim Abu Lehia, Professor, Food Science Department of King Sand University, Riyadh. The Food Science Department is to undertake some research and experiments on diversification of end-uses of cardamom Saudi Food Induitry.

large number of visitors. Photo panels and charts along with graded samples and cardamom products were displayed in our pavilion. A model of cardamom plant was another attraction in our stall. Samples of cardamom biscuits, toffees and Gahwa, the favourite drink of Arabs were distributed to the visiting public during all the five days of the exhibition. Other than Gahwa, the visitors evinced keen interest in cardamom flavoured True Biscuits and Horlicks.

A view of the Cardamom Board pavilion in the Saudi Food '83 held at Riyadh.

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News Shorts

Subsidised supply of Copper Sulphate

A scheme to supply Copper Sulphate at subsidised rates to registered small growers owning upto 8 hectares (20 acres) for the control of "Azhukal" disease in cardamom plantations is proposed to be implemented during 1983-84 season.
A scheme will be implemented a total area of 7,350 hectares distributed over three zones (Central Zone, Northern Zone and Eastern Zone). Application forms for subsidised supply of Copper Sulphate are available at the Field Offices of the Board.

The subsidy will be limited to Rs. 6.80 per kg. i. e. 50% of the average market price of Copper Sulphate marketed by different manufacturing firms or 50% of the actual cost whichever is less. The purchase and supply of Copper Sulphate at subsidised rate is to be made only from dealers approved by the Cardamom Board on production of the original allotment order by the leading allotee or his authorised agent along with the authorization letter. Individuals who mis-use/fraud on the use of the material supplied at sudsidised rate will be debarred from gettieg aid or subsidy from the Board in future. Depending on weather conditions, the planters will have to complete the spraying by 15th June 1983.

Sales-cum-study delegation for cardamom to middle east countries

Board had sponsored a three member sales-cum-study delegation to Saudi Arabia, Kuwait and U. A. E. during 28th December '82 to 8th January '83. Shri P. D. Khemani, Director (T. P.), Bahrain was the leader of the delegation.
This delegation was sent from the MDA fund. The objective of the delegation was to assess the market trends and competition from other cardamom producing countries and thereby finding ways and means for improving the share of export of Indian Cardamom to these countries.

During the course of the visit serious efforts were made to get cardamom business. But no on-the-spot business were concluded due to the high prices of Indian Cardamom coupled with short supply. But this visit has enabled to establish good business contract with major importers and traders of cardamom in prime markets.

Karnataka pradesh krishik samaj

Karnataka Pradesh Krishik Samaj is arranging the 3rd Agricultural Study Tour of Karnataka state farmers in the Far Eastern Countries i.e. Japan, Hongkong, Tailand, Manila and Singapore for twenty days commencing during 3rd week of May 1983. The exact date of departure will be finalised and intimated after confirmation of reservations by air lines abroad hotels etc.

Total cost of foreign tour is Rs. 20260/- per person. This amount includes air fare of Rs. 10,360/-, cost of accommodation in good standard hotels, airport transfers, half day sight seeing as per itirenary, breakfast, vegetarian dinner (6150/-), cost of 300 U. S. Dollars (3000) (approximate) Airpor tax payable at Madras Rs. 100/-, cost of 20 U. S. Dollars equivalent to Rs. 200/- to be purchased at Madras Airport and Rs. 100/- towards passport fee and Japanese Visa charges. This also includes train fare from Bangalore to Madras and sponsoring charges of Karnataka Pradesh Krishik Samaj. The passengers have to pay by themselves the airport taxes at each airport in the local currency of each country. Out of 500 Dollars allowed to a passenger, 200 Dollars will be retained by the Japan Airlines for making arrangements. This is included out of Rs. 6150/- paid by the passengers concerned, In addition, the farmer has to become Life Member of the samaj if he is not a member. The total number of farmers proposed in this batch is 30

The terms and conditions for this Agricultural Study Tour and application form can be had from the Secretary, Karnataka Pradesh Krishik Samaj, Bangalore.

Increase in Subsidies for coffee proposed

The Union Government was considering a proposal by the Coffee Board to increase subsidies on replantation and expansion. The enhancement in subsidies was expected to increase production of coffee and improve quality to maximise export earnings. The decision on the minimum release price to be paid to coffee planters for internal sales was expected to be announced shortly. The matter was under consideration of the government.

German businessmen impressed by Indian skilled labour

A recent survey reveals that more than 80% of German businessmen come to India because of India's great potential of skilled labour and 60% because of the good Indian technicians available.

74% state that the large domestic market is the reason for their coming. Out of those who have already established business relations in India, 52% would like to expand by also investing foreign capital.

26% see no problems regarding remittance of royalties, profits etc. protection of foreign investments and repatriation of capital. On the other hand, nearly one-third complained about the high taxation in India.

These findings are the result of an opinion poll conducted amongst German businessmen who attended the EEC seminar held recently in Duesseldorf. The seminar was organised by the Indo-German Chamber of Commerce

More care for quality control of export items

The Government would pay greater attention to the quality control of export items and try to market them abroad under Indian brand names, according to the 129th report of the Public Accounts Committee (PAC), submitted to Parliament

The Government has accepted the committee's view that apart from cash assistance to exporters, promotion measures like quality improvement, adoption of latest technology' attractive packing and sales promotion methods were needed to boost Indian exports.

The Government has also accepted the PAC suggestion for computerisation of various functions of the chief controller's office and for setting up a cell to make cost study of export commodities. An analytical study of the cash compensatory support scheme also has been accepted.

Co-ordination with the Reserve Bank of India for faster realisation of the foreign exchange dues from export has also been promised by the Government.

Cure for hiccups

A doctor is offering "an almost 100 per cent successful" cure for hiccups, although he says he can only guess at the reasons for its effectiveness.

"Hiccups are a common and annoying symptom for which many remedies have been tried without consistent success," writes Dr. Steven Goldsmith of Bayside medical centre in Springfield, Massachusetts. His letter was published in the journal of the American Medical Associaton.

Doctors have reported that using a plastic or rubber suction catheter to stimulate the nasopharynx -- the upper part of the pharynx connected with the nasal passages — got results in 84 out of 85 patients.

But Dr. Goldsmith says he has had success with a simpler procedure which a cotton swab is used to massage the soft palate for about a minute at its centre point, just beyond the spot where the soft and hard palates meet on the roof on the mouth.

Ficci pleas to Govt.

The Federation of Indian Chambers of Commerce and Industry (FICCI) has called for a blanket Government permit for hiring foreign technicians, promotion of joint ventures with multi-nationals, and acquisition of funds for research from foreign firms and independent agencies.

ISD from Madras to Australia

International Subscriber Dialling (ISD) was introduced from Madras to Australia from today.

The dialling code for Australia is "61". To get Australia the subscribers should dial "900" first and after getting a second dial tone, should dial "61" followed by the area code and the subscriber's telephone number.

Increase in Traffic at Airports

The four international airports, under the International Airports Authority of India (IAAI) at Bombay, Delhi, Calcutta and Madras handled on an average over 34,500 international and domestic passengers everyday during April–September 1982 registering an increase of 11 percent over the same period in 1981.

According to a review of traffic for the period April-September 1982, the four airports handled 15,602 international passengers per day. During the corresponding period in 1981, the average daily traffic of international passengers was 3,908. The average daily domestic traffic increased from 17,856 in April–September 1981 to 18,906 in April- September 1982. In all, the four airports handled 6,314. 646 passengers during the first six months of the current financial year as compared to 5,512,456 passengers in the same period of the previous year. As many as 2,854,937 international and 3, 459,709 domestic passengers passed through these airports during April–September 1982. Individually. the Bombay airport handled 1,660,926 international and 1,381,253 domestic passengers during the period. Delhi airport was used by 937,492 international and 1,063,755 domestic passengers. The Clacutta airport accounted for 133,471 international and 565,408 domestic and the Madras airport 123,948 international and 449,293 domestic passenger.

The average daily aircraft movements, both international and domestic, at the four international airports increased from 305 in April-September 1981 to 316 in April-September 1982. In all, the airports handled 57,371 aircraft movements in the first six months of 1982 as against 55,646 movements in the corresponding period of the previous year. The airport at Bombay handled 12,556 international and 11,358 domestic aircraft movements during the period The airports at Delhi, Calcutta and Madras handled 6,685, 2,889, and 1,653 international as well as 10,389 6,457 and 5,384 domestic aircraft movements respectively.

(Continued from Page 13)

Improved version of Solar Cooker

The Hyderabad scientist who some years ago designed the "solar basket" for cooking with solar energy has now built an improved version of the basket which he says can trick the sun and do every kind of cooking except frying.

The new solar basket also works at a higher efficiency according to Dr. Von Oppen working with the International Crops Research Institute for the semi-arid and tropics.

It is capable of cooking all meals that require wet cooking, steaming, baking or roasting but not frying, says Dr. Oppen.

The improved model consists of a metal frame for holding and adjusting the sun basket according to seasonal and daily changes of the sun's position.

Sunlight is collected by a 1.2 metre diametre reflecting mirror which is glued on to a parabolic shell made of fibreglass.

A water pipe that serves as a timing device for automatic adjustment of the position of the mirror during the day is integrated into the stand.

According to Dr. Oppen, the efficiency of the new solar basket is 50 per cent. In other words the solar basket will deliver 500 watts to the cooking not for every 1,000 watt of solar power collected by the mirror.

In good sunny conditions the time taken for cooking and the quality of cooked food match those of the kerosene stove, says Dr. Oppen.

A small survey conducted in Hyderabad by the department of home science of the Andhra Pradesh Agricultural College to find out the acceptance of the sun basket received encouraging response

OVERSEAS TRADE ENQUIRIES

Trade enquiries received at the Saudi Food '83 in Riyadh

1. Mr. Saad M. Al-Bakmi,
General Manager,
Hmood Al-Bakmi Trading Est.
P.O Box 17080,
Riyadh-C.E. 30074.
Telephone 4985107
Telex 203628 SELF

2. Mr. M.A.I. Kusyair,
SABIC,
P.O. Box 4098,
Riyadh.

3. Mr. Bunder Abdul Karim,
Bunder Abdul Karim Est.
P.O. Box 22200
Riyadh.
Telephone 4121220 Cardamom

4. Mr. Mohsen Al-Harbi,
Horimila Co.,
Riyadh.
Telephone 5642936 Hail

5. Mr. Iftikhar A Khan,
Binzagr Co.,
Post Box 392,
Riyadh-11411. True Cardamom Biscuits

6. Dr. Abdul Gaffar,
Al Dakheel,
P. O. Box 6318,
Riyadh.
Telephone 204559 AMANA SJ Biscuits

7. Mr. Ahmed Dokhan
Saudi Arabian Standards Organisation,
P. O. Box 3437,
Riyadh. Cardamom

8. Mr. Ahmed Al Sulaibi,
Pan Arab,
P. O. Box 41224,
Riyadh.
Telephone 4772195 Cardamom

9. Mr Mohammed M. Natouv,
General Manager,
Construction Progress Office,
P. O. Box 42390
Riyadh.
Telephone 4486400
Telex 203249 TAQADM SJ

10. Mr. Mehmet Jasar Ozsigiman,
Medineirmunewere,
Post, Box 1001,
Riyadh. Cardamom

11. Mr. Rudolph Abou Kater,
Arab Information Bureau,
21, Rockbeare Grove,
Ivanhoe 3079,
Melbourne,
Australia,
Telephone (03) 4974163
Telex AA32101 Cardamom cashewnut

12. Mr. H. Wren,
Export Manager,
C.C Spice U.K. Ltd.,
Astmoor, Runcorn.
Cheshire WA7 1PE.
Telephone 09285-65221
Telex 628343

13. Mr. Ahmed Khames,
Sales Representative,
Thabeer Trading & Contracting Co.,
P. O. Box 3709,
Riyadh
Telephone 4469880 4465054
Telex 204014 THABEER

14 Mr. Ghanshyam V Thakwani,
Ibrahim A Al-Kharashi Est.,
P. O. Box No. 2887,
Riyadh.
Telephone 4025083 4040995
Telex 202478 METRO SJ
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15 Mr. Mohan Khubani,
Elbalwi Est.,
Balhamar Building,
5th Floor, Room No. 44,
P. O. Box 11847,
Jeddah.
Telephone 6431309
Telex 402209 SHEHBI SJ
Cable KINSFOLK

16. Mr. Imad Tabba'a,
Tasalee Food Est.,
P. O. B. 8060,
Jeddah.
Telephone 6711077
Telex404335 ATSAFO

17. Mr. Ahmad A Nagi,
Saudi Trading & Development Inc.,
P. O. Box 15055,
Riyadh
Telephone 4647514
Telex 200911 ST AD SJ
Cable HAZEM

18. Mr. Yahia A Al-Hujailan,
Kuwait Finance House,
Trading Div.,
P. O. Box 24989,
Safat, Kuwait.
Telephone 431022
Telex 44742 KT BAITMAL
Cable BAITMAL

19. Mr. Mansoor Dehlawi,
Hisar Trading Est.,
P. B. No. 1498
Riyadh.
Telephone 4772263 Cardamom

20. Mr. Ibrahim Al Romi,
P. O. Box 21180,
Riyadh.
Telephone 4123895 High Quality Cardamom

21. Mr. Hashem
Y. A. Al-Saadoon Est.,
P. O. B. 10298,
Riyadh.
Telephone 4653984

22. Mr Shafiq Ahmad,
Commercial Manager,
Al-Joud Trading & Contracting Est.,
P O Box No. 15483,
Riyadh.
Telephone 4067077
Telex 203922 ATHAFY SJ
Cardamom
Biscuits, Cardamom
Glaxo Complan

23. Mr. Mohammed Ali Sayyar,
M. A. Al-Sayyar & Sons Co.,
P. O. Box 6806
Riyadh. Cardamom

Other Trade Enquiries

1. M/s. Nasser S Al Othman,
Trading Establishment,
P. O. Box 5882,
Dammam,
Saudi Arabia.
(Tel. 8332208. Telex : 602436 JOUD SJ)

2. M/s. Bandar Mohsen Meshaan Elnifai Est.,
Shargia Place,
Taif,
Saudi Arabia.
(Tel: 7328914).

3. Mr. Yahia Al-Hujailan,
Kuwait Finance House,
Trading Division, Kuwait.
(Telex: 44742 BAITMAL KT).

4. M/s. Ibrahim Al Fayez Trading Est.,
P. O. Box 20309. Riyadh.
Telex : 200493 BAKHMS
Telephone 4041801 Spices

5. Mr. R. N. Mistry
Capricorn Agency,
9, The Broadway,
Wealdstone,
HA3 7EH,
Middlesex,
United Kingdom.

2. P. O. Box 5062,
Dubai,
U. A. E.

Monthly Statistical Abstract—February '83

Auction Sales and Prices

The State-wise auction sales and prices of Cardamom during the current year and previous year are given below:

State	Feb.'83 Qty (MT)	Feb.'83 Ave. price (Rs/kg)	Feb.'82 Qty (MT)	Feb.'82 Ave. price (Rs/kg)	Aug-Feb. '83 Qty (MT)	Aug-Feb. '83 Ave price (Rs/kg)	Aug-Feb.'82 Qty (MT)	Aug-Feb.'82 Ave.pric (Rs/kg)
Kerala	77	184.67	110	123.67	1164	156.93	2140	121.28
Tamilnadu	6	170.43	8	99.72	60	149.14	91	93.78
Karnataka	54	181.09	53	115.65	586	154.40	696	99.65
Total	137	182.64	171	120.04	1810	155.85	2927	115.28

It may be seen from the above table that auction sales during February '83 was less by 34 M. T. compared to February '82.

The cumulative auction sales during August-February '83 was 1810 M T. against 2927 M. T. during August-February '82 indicating 38% decrease in terms of quantity compared to previous year. This is mainly due to the fall in production and the consequent poor arrivals in the main auction centres of Kerala, Karnataka and Tamilnadu during the current season compared to last season. The average price realisation was higher by Rs 41/-per kg during the current season compared to previous season.

Export

Month-wise provisional figures of export of Cardamom during the current financial year with comparative figures for the previous year are given below:

It may be seen from the below statement that export both in term of quantity and earnings decreased sharply during April-February '83 when compared to the performance during the corresponding period of the previous year. The main reasons for the decline in export are lack of sufficient orders from Middle East due to availability of stock during the off-season, severe price competition from Guatemala, drastic reduction in crop production during 1982-83, higher prices in the domestic market etc. The unit value realisation has gone up by Rs. 36/- per kg during the current year compared to last year.

Month	1982-83 Qty (kgs)	1982-83 Value (Rs)	1982-83 U. Value (Rs/kg)	1981-82 Qty (kgs)	1981-82 Value (Rs)	1981-82 U. Value (Rs/kg)
April	42195	5992441	140.02	278077	32166011	115.70
May	75026	11433006	152.39	97866	10812936	110.49
June	14950	1696977	113.51	120547	13607627	112.88
July	104435	13835246	132.48	112235	14654746	130.57
August	20783	2924509	140.72	79062	10089187	127.61
September	20330	3753632	184.88	117109	14901138	127.24
October	51503	7605284	147.67	131940	17409648	131.95
November	126146	28195373	223.51	469400	65508771	134.56
December	256153	40082530	156.44	354919	47886319	134.92
January	60073	10569903	175.95	333770	45734979	137.02
February	133036	24118096	181.29	116694	14716939	126.12
Total	904680	150211997	166.04	2211619	287488301	129.99

Source: Report from Customs Authorities based on shipping bills passed and cess collected.

AUCTION SALES AND PRICES OF CARDAMOM

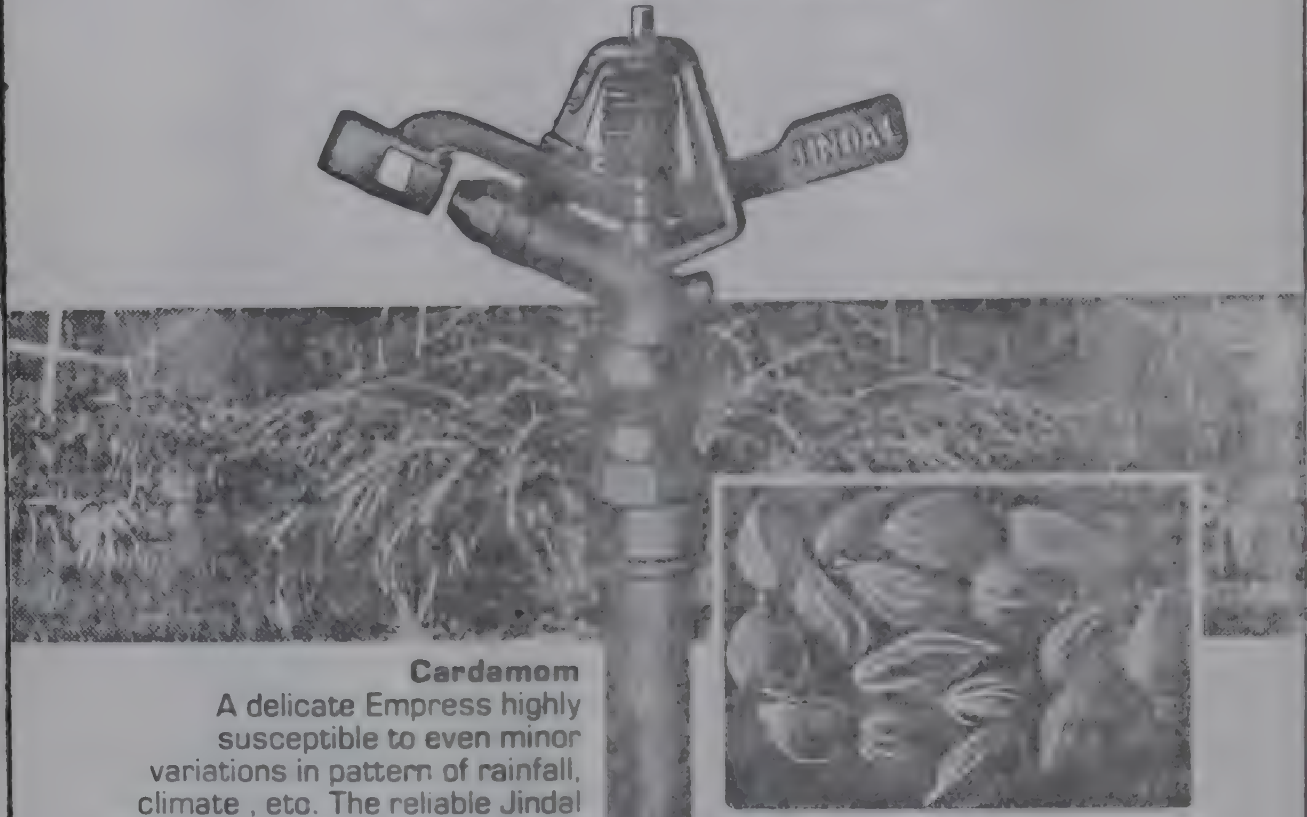
Centre	February '83			Febr uary' 82			Aug—February 1983			Aug—February 1982		
		Prices (Rs/kg)			Prices (Rs/kg)			prices (Rs/kg)			Prices (Rs/kg)	
	Qty. Sold (kgs)	Max:	Average	Qty. Sold (kgs)	Max:	Average	Qty. Sold (kgs)	Max:	Average	Qty. Sold (kgs)	Max	Average
KERALA												
Vandanmettu	60541	251.00	185.85	77898	163.10	125.89	772187	401.00	160.12	1251174	243.40	124.08
Santhanpara	6760	208.00	167.59	14554	140.00	107.18	237860	222.00	147.31	414357	172.30	109.37
Udumbanchola	—	—	—	—	—	—	—	—	—	1273	127.60	113.97
Kumily	8693	251.50	190.23	16388	161.10	128.12	133227	370.50	156.22	436789	226.90	125.49
Kallar	—	—	—	—	—	—	3618	159.00	139.13	—	—	—
Cochin	1307	212.00	181.47	903	141.50	116.60	17381	250.00	155.87	15893	169.00	110.42
Kajanapara	—	—	—	—	—	—	—	—	—	20860	148.90	110.70
TOTAL (KERALA)	77301	251.00	184.67	109743	163.10	123.67	1164273	401.00	156.93	2140346	243.40	121.28
TAMILNADU												
Pattiveeranpatti	5992	212.90	170.43	6148	152.10	107.76	55317	246.00	150.99	56137	153.30	103.59
Bodinayakanur	—	—	—	2003	126.20	75.04	4264	178.00	125.20	34854	135.00	77.98
TOTAL (TAMILNADU)	5992	212.90	170.43	8151	152.10	99.72	59581	246.00	149.14	90991	153.00	93.78
KARNATAKA												
Somwarpet	531	227.10	183.86	—	—	—	531	227.10	183.86	478	95.00	83.24
Mercara	292	190.00	182.03	—	—	—	50778	240.50	151.04	76895	170.00	105.31
Mangalore	8941	225.00	180.37	506	130.00	100.83	37229	225.00	162.95	93204	157.00	103.69
Saklaspur	42367	242.50	181.16	51115	173.00	115.64	466338	250.50	154.79	498949	244.00	98.16
Sirsi	1306	230.99	183.33	1099	155.09	121.64	22294	230.99	144.26	21696	176.99	95.21
Siddapur	441	225.61	178.88	205	127.99	122.60	8852	225.61	141.23	4496	151.85	90.53
TOTAL (KARNATAKA)	53878	242.50	181.09	52925	173.00	115.65	586022	250.50	154.40	695718	244.00	99.65
GRAND TOTAL	137171	251.00	182.64	170819	173.00	120.04	1809876	401.00	155.85	2927055	244.00	115.28

Source : Reports received from Licensed Cardamom Auctioneers.

CULTIVATION OPERATIONS

MONTH **MAY**	South-West Monsoon areas (Kerala-Tamilnadu)	North-East Monsoon areas (Tamilnadu)	South-West Monsoon areas (Karnataka)
Primary Nursery	Raking of soil in the inter-spaces between rows continued third round weeding-Routine watering and plant protection measures.	Routine watering and maintenance - Plant protection measures.	Regular watering, plant protection and weeding-provision and cleaning of drainage channels.
Secondary Nursery	Watering according to necessity. Third round digging in the next season's nursery site, if sufficient rains are received. Collections of pandal materials.	Watering and routine upkeep	Routine watering, plant protection and weeding. If, stem borer infestation is noticed dead shoots to be collected and burnt.
Starting of New Plantations	Filling up of the pits with the fertile surface soil after receiving a few summer showers.	Filling pits-taking pits for planting shade trees whereever necessary. Plant protection measures in last year's new planted ares	Filling pits with farm yard manure or compost and surface soil - provision of drains across the slope to prevent-soil erosion-Collecting sticks for staking seedlings.
Maintenance of Plantations	First round weeding and trashing-trips control-Manuring after receipt of a few summer showers.	Thrips control-cleaning the boundary, footpaths, roads, drainage channels etc.	Application of farm yard manure or compost and fertilizers-Thrips control-Filling up of pits for vacancy covering - Regulation of shade. Provision of drainage channels.

ORDER A SHOWER FOR THE QUEEN



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JAL-1-83

The Structure of Cardamom Prices-II

Dr. C. A. Jos

Price Movements:

The study of price fluctuations over time may be made either to determine trends over long periods or variations during different seasons of the year. It will be observed that the average price has fallen steeply from Rs. 58.76 in 1970-71 to Rs. 29.08 in 1971-72, if all the auction centres are taken together, a fall of more than 50 per cent over an year. If we are to consider the seriousness of the fall in price at Vandanmettu alone which handled 37.5 per cent of all the cardamom (Small) of india, it is rather shocking. The price fell down from Rs. 81.56 to Rs. 30.22, a fall of 63 per cent during the same period. There were two importent causes for this phenomenon: (1) India, the principal producer of cardamom in the world was increasing her cardamom production continuously since 1968-69. It increased from 2100 M.T in 1968-69 to 2300 M.T in 1969–70, 3170 M.T. in 1970–71 and 3785 M.T. in 1971-72. (2) The principal buyers of Indian (small) cardamom might have made good procurement in the immediate years preceding to the year 1971-72. This was followed by reports from India that the cardamom production was all time high which caused the foreign prices to decline. Consequent upon the decline in prices especially in the West Asian markets, the Indian exporters become Panic and they were furiously busy in unloading their stock which further depressed the foreign market prices and ultimately the inevitable came to pass.

The year 1972–73 witnessed a sudden ~~fall~~ in the production of cardamom from 3785 M.T. in 1971-72 to 2670 MT in the year in question, a fall of 29.5 per cent over a period of an year. But this helped to raise the weighted average prices at the auction centres from Rs. 29.08 to Rs. 49.70 per kg. an increase of about 71 percent. The production of cardamom in India never reached the peak level production of the year 1971-72 till the year 1977-78, though there had been significant variations in the annual production.

Since the year 1971-72, prices of cardamom gather an upward momentum due to shrinkage in production not only in India but also in Guatemala on one side and the boom conditions in the oil rich Arab countries consequent upon the hike in the oil prices till the year 1977-78. The weighted average prices of cardamom at different auction centres rose from Rs. 29.08 per kg. in 1971–72 to Rs. 156.75 per kg. in 1976-77. In the year 1977–78 with an increase in production to the level of 3900 M.T., the weighted average prices at the auction centres declined to Rs. 134.41 per kg. However, in the following year auction prices picked up, and reached the level of Rs. 166.42 per kg. only to decline in the succeeding years with increased production with range of 4500 M.T. when the production reached the level of 4500 M.T. In 1979-80, the weighted average prices of cardamom at auction centres declined to Rs. 134.88 per kg. and further declined to Rs. 98.92 per kg. in 1980-81 (August-July) even though the production was less by 100 M.T. during the same period. If the year 1978–79 is supposed to be the best year for the cardamom growers in general in terms of better production and the best price, the year 1982-83 seems to be the worst year in terms of both the production and prices, during the decade starting from 1972–73.

The reason for this phenomenon is not far to seek. The natural play of forces in the market

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will mean proportionately lower prices for higher production. The pitiable part is that higher production is not always the result of better methods of production or increase in productivity. As a result of the efforts made under the five year plans in which we have set very high targets, production is increased indiscriminately and sometimes supported by favourable climatic conditions. As H. M. Patel puts it, "...... these figures are deceptive, for the increase in production is due to so much increase in yield per hectare as to increase in the acreage under cultivation. And it is increase in yield that really matters" such a situation has been described by G. Mydral also. "In some cases, a single underdeveloped country occupies so important a place in the world market in export of one commodity that an increase of its supply would bring down the price substantially and consequently, increase its export proceeds less than proportionately perhaps even reduce them". This has actually happened with respect to Indian Cardamom more frequently.

Peasant families form the basic units of our society and its importance can never be exaggerated in a subsistence economy. Peasant production is the main alternative to wage employment. Hired labour from outside the family, however, becomes necessary in the case of cardamom plantation and in such a situation the peasants cease to be self financing and have to borrow from other sources. All the more, they are now, exposed to violent fluctuations in cardamom prices. Thus the lack of any effective control over the volume of production on the one side and the wide fluctuations in prices make cardamom cultivation a real gamble.

To quote G. M. Meier, "when the export expansion of peasant crops merely reproduced existing production conditions on a larger scale, the stimulus to develop was less than it would have been if the expansionary process had entailed the introduction of new skills and more productive re-combinations of factors". The problem then centres round the problem of attaining greater efficiency by the introduction of improved varieties of crop, post control, use of fertilizers and all the more the incentive to production based on stable and economic prices.

Price Differentials:

There has been marked variations in the prices of cardamom dependent mostly on variety of cardamom and pattern of production in the country. The production of cardamom is confined to three States vis-a-vis Kerala, Karnataka and Tamilnadu. If we are to take the production figures for the period 1977-78 to 1980-81, Kerala accounted for 72.5 per cent followed by Karnataka and Tamilnadu with 20 per cent and 7.5 per cent respectively. The weighted average prices of cardamom in three States during the same period are given in the Table No.1.

From a close study of the price data set out in the table given, it will be observed that the prices realised at the auction centres of the three States are varying considerably. The prices are invariably the highest in Kerala centres mainly because of the right time of arrival of the produce in bulk, noted for the superior quality, when the major commitments of the exporters have to be met. Other important reasons are the late arrival of the produce in the Tamilnadu auction centres and the totally different trade description of cardamom reaching Karnataka auction centres with which the exporters find less favour. Further, the exporters and big wholesalers at the auction centres at Kerala followed by the Karnataka centres are

TABLE No. 1

State-wise Production and weighted average prices of Cardamom in India
Production in M.T. & Prices in Rs./kg.

States	1977—78 Production	1977—78 Prices	1978—79 Prodn	1978—79 Prices	1979—80 Prodn	1979—80 Prices	1980—81 Prodn	1980—81 Prices
Kerala	2,900	142.55	2,900	178.71	3300	141.98	3,100	108.51
Karnataka	700	104.93	800	133.98	850	118.93	1,000	78.68
Tamil Nadu	300	116.61	300	136.86	350	113.55	300	75.45

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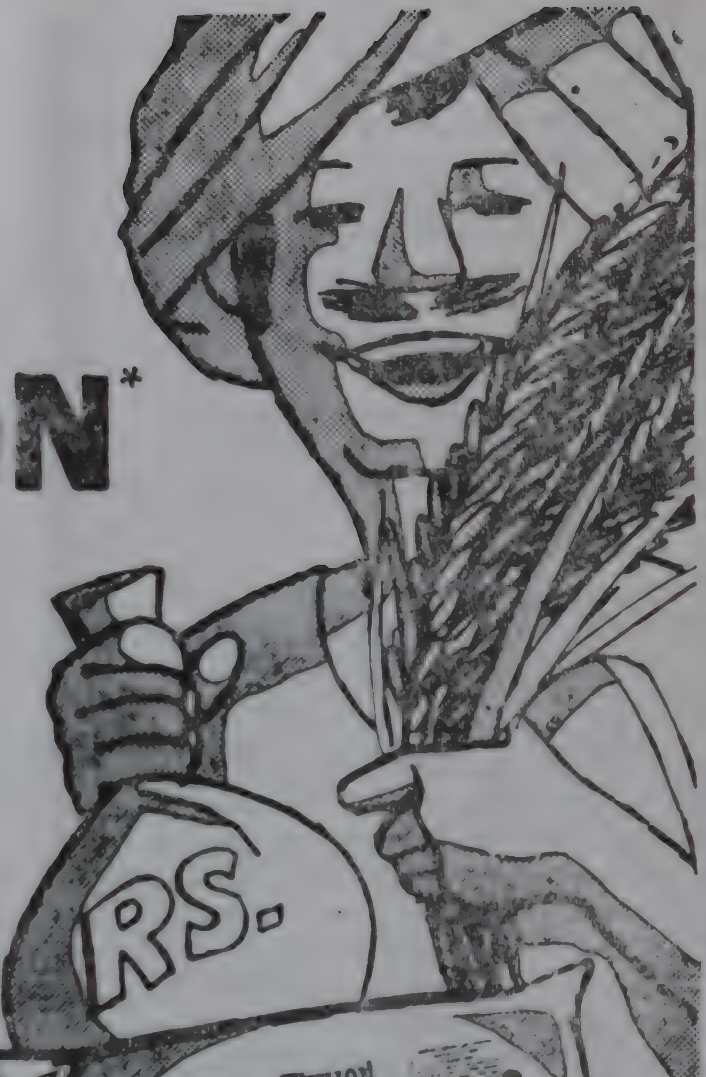

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attracted by way of large supplies of different grades or commercial descriptions and the proximity of auction centres to the cardamom growing areas. The cardamom growers of Kerala are well-informed and better organised than their counterparts in Tamilnadu, though the Karnataka growers are superior in this regard. All these lead to better prices to prevail in auction centres of Kerala whereas a mixed pattern is noticed in the case of Tamilnadu and Karnataka. Thus, Karnataka commanded higher prices than in Tamilnadu in the years 1979-80 and 1980-81 whereas Karnataka prices were lower than that of Tamilnadu in the immediate preceeding two years.

For a detailed analysis of price data over a fairly long period of time the Table No.II is given below:

TABLE No. 2

Statewise weighted average prices of Cardamom during to 1965-66 to 1980.81. (Crop Year) together with Export Prices (F.O.B) for the same period.

Year	Kerala	Karnataka	Tamilnadu	Exports
1964–65	25.05	26.04	23.93	23.14
1965–66	44.06	43.29	39.36	44.44
1966–67	41.04	45.36	39.49	49.31
1967–68	42.33	43.55	37.64	47.75
1968–69	49.39	53.72	50.30	57.06
1969–70	77.60	82.87	70.86	82.72
1970–71	53.23	45.27	40.76	57.04
1971–72	30.33	29.08	25.88	36.71
1972–73	54.93	38.14	43.30	58.46
1973–74	60.54	59 83	56.80	69.69
1974–75	76.93	75.06	70.06	86.08
1975–76	89.47	78.67	81.23	102.71
1976–77	164.20	145.04	143.09	183.57
1977–78	142.55	104.93	116.61	173.40
1978–79	178.71	133.98	136.86	205.00
1979–80	141.98	118.93	113.55	176.78
1980–81	108.51	78.68	75.45	148.20

In the case of the Karnataka State, the weighted average prices of cardamom were definitely higher than in the case of Kerala State from the year 1964-65 upto the year 1969-70 with the exception of the year 1965-66. From 1970-71 onwards, the prices realised at the auction centres of Kerala are invariably higher than that of the Karnataka State During this period of 1970-71 to 1980-81, the maximum difference is observed in the year 1978-79 with an amount of Rs. 44.73 per kg. It is important to note that in this year, the weighted average prices of cardamom at auction centres of Kerala was Rs. 178.71 per kg. as against Rs. 136.86 per kg. in Tamilnadu and Rs. 133.98 per kg. in Karnataka respectively, the unit value of cardamom exported being Rs. 205/– per kg. This shows that wide variations in prices exist on account of both imbalances between supply and demand and speculative motives on the part of traders and exporters, greater the degree of imbalance, still greater the influence of speculative motive.

In the first half of the period 1965-66 to 1980–81 the variations in weighted average prices at the auction centres were in the range of Rs. 4.70 in the year 1965-66 to Rs. 16.79 in 1972-73. But in the latter half the variations were in the range of Rs. 3.74 in the year 1973–74 to Rs. 44.73 per kg in the year 1978-79. In the last three years, 1978-79 to 1980-81, steep fall in prices of cardamom is found which is in the order of Rs 70,20, Rs. 57.30 and Rs. 61.41 per kg. in Kerala Karnataka and Tamilnadu respectively.

Over and above these kinds of price differences, we have already observed that there are wide fluctuations in prices from year to year. A high degree of year to year price diferences of a serious nature has a direct impact on the producer's income. In a rising market, producers are paid more than the proportionate price and the gear is reversed when the supply is supposed to be slightly higher than the anticipated demand, resulting in a greater price instability in prices.

Even if the production uncertainities are removed, price uncertainty may cause fluctuations, in turn. The price uncertainty may be measured in terms of co-efficient of variations. The co-efficient of variation of yearly prices calculated from the average annual prices given below indicates that during the last six years 1975-76 to 1980-81. Karnataka has experienced highter degree of price variations followed by Kerala and Tamilnadu in relation to variations in export prices.

TABLE 3

Co-efficient of variation of yearly prices of cardamom for the period 1975-76 to 1980-81

Auction Centres	Variety	Co-efficient of variation %
Kerala	Alleppey Green	22.20
Karnataka	Coorg Green	23.07
Tamilnadu	Alleppey Green	21.35
Export Market (F.O.B.)	Indian Small Cardamom	20.27

High degree of variation in the prices introduces an element of risk and indecision as it upsets the pattern of consistent growth in the production of crops. This is evident from the fact that if we were to calculate Co-efficient of variation of yearly prices of cardamom for the period 1964-65 to 1975-76, it was much higher than in the period, since then. Table No.IV gives the co-efficient of variation of yearly prices of cardamom during the period 1964-65 to 1975-76 for purposes of comparison.

TABLE 4

Co-efficient of variation of yearly prices of cardamom for the period 1964-65 to 1975-76

Auction Centres	Variety	Co-efficient of variation %
Kerala	Alleppey Green	44.10
Karnataka	Coorg Green	34.60
Tamilnadu	Alleppey Green	35.74
Export Market (F.O.B.)	Indian Small Cardamom	33.20

It is highly gratifying to note that the variations in prices have been considerably reduced recently in comparison with the period 1964-65 to 1974-75. Increase in prices and a less degree of variations than in the past are largely responsible for a real increase in the production of cardamom during the period 1975-76 to 1980-81.

Fluctuations in prices coupled with rise in cost of production may lead the cultivators to neglect their crop. In order to make its cultivation noble the prices of cardamom need adjustment in such a manner as to make it reliable to the cultivators. It is highly desirable, therefore, to have some price stabilisation programme under the auspices of the Cardamom Board so as to reduce the fluctuations in prices within a reasonable range. A high degree of year to year variability in the prices of a commodity coupled with regional price differences of a serious nature has a direct impact on the producers' income. In a rising market, producers are paid more than the proportionate price and the gear is reversed when the supply is supposed to be slightly higher than the anticipated demand resulting in a greater price instability. The most important factor of a country's ability to export depends upon whether it is able to offer the commodities at comparative prices. At the same time, the prices should be reasonable and reliable so as to make the cultivation economically viable. Instead of a very high price followed by a sudden fall, prices reasonable to both buyers and sellers with a fair degree of stability would be really helpful for sustained growth in production and export of cardamom.

Seasonal Variations:

Monthly State-wise weighted average prices of cardamom at auction centres during 1975-76 to 1979-80 are given in the next page.

Generally speaking, prices improve during the months, October to January. This is attributed mainly to the consumer's preference for the fresh arrivals and indecision on the part of the exporters regarding the annual available supplies Thereafter, prices generally register a fall due to increased market arrivals. Thus for example in the year 1978-79 (August to July) the highest average price was recorded at Rs. 184.73 per kg. in the month of October. Being a successful year for the cardamom producers, the prices continuously declined to reach Rs. 129.41 in the month of May of the same year. Again prices improved to Rs. 165.15 in the month of October, 1979 only to decline upto December which represented the peak period for cardamom arrivals.

TABLE No. 5

•

State-wise Month-wise Sales & Weighted Average Prices of Cardamom at Auction Centres in India

Months		Kerala		Tamilnadu		Karnataka		Total	
		Sales (M T.)	Av. Price (Rs/kg.)	Sales (M.T.)	Av Price (Rs/kg.)	Sales (M T.)	Av. Price (Rs/kg.)	Sales (M. T.)	Av. Price (Rs/kg.)
August	1975	10	72.24	5	71.18	14	68.65	29	70.25
September	,,	49	79.23	10	72.85	25	75.67	84	77.42
October	,,	290	87.04	16	76.12	75	73.18	381	83.84
November	,,	387	87.80	18	77.17	83	74.94	488	85.22
December	,,	366	90.05	17	76.27	70	80.22	453	88.00
January	1976	191	94.63	24	87.95	86	80.13	301	89.94
February	,,	141	93.76	19	80.40	48	76.22	208	88.52
March	,,	98	91.47	14	80.56	41	80.02	153	87.41
April	,,	1	94.88	12	93.05	45	90.85	58	91.40
May	,,	@	111.27	8	90.70	7	104.73	15	97.10
June	,,	...	...	1	99.28	1	106.17	2	103.21
July	,,	...	...	1	85.00	1	106.21	2	99.11
Total:		1533	89.47	145	81.23	496	78.67	2,174	86.45
August	1976	6	131.77	3	125.63	2	147.88	11	132.43
September	,,	77	130.96	5	114.10	22	127.87	104	129.55
October	,,	195	154.78	13	147.92	89	140.71	297	150.25
November	,,	257	183.42	18	168.90	80	157.21	355	176.78
December	,,	131	177.10	16	165.60	64	154.39	211	169.32
January	1977	57	184.38	7	174.01	21	158.04	85	177.19
February	,,	*	*	3	155.03	20	145.03	23	146.51
March	,,	10	138.26	12	158.08	25	146.09	47	147.55
April	,,	10	125.11	15	120.81	24	135 78	49	129.11
May	,,	42	115.65	11	103.61	9	136.84	62	116.55
June	,,	16	131.26	6	105.50	6	112.48	28	121.97
July	,,	...	...	4	101.28	17	108.66	21	107.44
Total		801	164.20	113	143 09	379	145.04	1,293	156.75
August	1977	69	132.39	5	114.85	26	99.26	100	122.91
September	,,	358	127.66	15	100.59	59	97.98	432	122.68
October	,,	607	139.75	21	105.60	81	91.01	709	133.18
November	,,	475	147.86	18	107.03	87	94.27	580	138.54
December	,,	378	156 23	21	129.66	125	109.58	524	144.06
January	1978	103	145.08	18	125.01	59	115.88	180	133.46
February	,,	48	124.79	13	110.50	26	108.73	87	117.84
March	,,	232	144.60	12	115.70	36	116.18	280	139.68
April	,,	31	147.39	14	131·74	25	123.91	70	135.78
May	,,	...	...	12	124.67	13	127.79	25	126.32
June	,,	...	...	3	86.89	4	129.60	7	112.23
July	,,	...	...	4	138.34	@	135.41	4	138.32
Total		2,301	142.55	156	116.61	541	106.93	2,998	134.41

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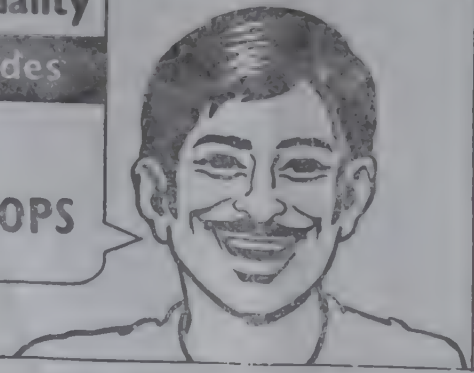

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15-312 (812)

Months		Kerala		Tamilnadu		Karnataka		Total	
		Sales (M.T.)	Av. Price (Rs/kg.)	Sales (M. T.)	Av. Price (Rs/kg.)	Sales (M.T.)	Av. Price (Rs/kg.)	Salees (M.T.)	Av. Price (Rs/kg.)
August	1978	54	161.94	5	144.77	3	148.15	62	159.91
September	,,	307	187.97	12	161.17	43	149.15	362	182.42
October	,,	622	193.36	22	157.00	117	144.19	761	184.73
November	,,	483	179.52	23	153.48	113	137.26	619	170.85
December	,,	358	175.33	28	146.54	63	120.68	449	165.87
January	1979	336	171.17	18	137.00	100	130.04	454	160.81
February	,,	129	155.12	19	127.22	52	123.43	200	144 22
March	,,	124	142.30	21	116.73	78	126.70	223	134.42
April	,,	3	137.98	28	126.12	73	134.62	104	132.44
May	,,	...	...	21	125.91	40	131.32	61	129.41
June	,,	...	...	15	124 29	20	135.81	35	130.75
July	,,	...	...	14	129.79	9	143 11	23	134.92
Total	,,	2,416	178.71	226	136.86	711	133.98	3,353	166.42
August	1979	36	155.69	4	133.88	8	136.11	48	150.48
September	,,	178	169.29	13	135.61	43	145.12	234	162.96
October	,,	496	170.09	13	140.15	87	140.80	596	165.15
November	,,	286	143.00	16	130.61	90	120 71	392	137.39
December	,,	457	126.94	49	127.87	67	113.21	573	125.42
January	1980	346	137 65	37	129.86	94	122.36	477	134.03
February	,,	140	120.11	39	114.89	36	110.45	215	117.54
March	,,	120	105.29	36	97.38	46	112.16	202	105.43
April	,,	130	118.61	31	92.10	39	114.21	200	113.64
May	,,	36	123.40	24	86.53	40	103.89	100	106.84
June	,,	...	...	6	64.56	42	95.88	48	92.03
July	,,	...	...	3	66.62	35	93.26	38	90.86
Total		2,225	141.98	271	113.55	627	118.93	3,123	134.88

Note: * There was no auction due to the imposition of export duty of Rs. 50 per Kg. during 12-1-1977 to 24-2-1977.

@ '— Negligible.

Source: Reports received from Licensed Auctioneers quoted by the Cardamom Board, Cochin, Cardamom Statistics 1979-80, PP 16–18.

In important assembling markets, cardamom continues to arrive more or less throughout the year. But the main harvesting period is September to December in the case of Kerala and Tamilnadu and October to January in respect of Karnataka. The total supply is at its peak during the months of October and November with exceptions in certain years when the season starts early or late depending on the arrival of the monsoons. The supply is at its peak during the months of November and December.

Even though these months have been described as peak months, the total quantum of arrivals in this period is only slightly more than that of January. But when supplies are very badly affected or there is a bumper crop and, or large carry over, notable disturbances are observed. In the year 1978–79, when India had a bumber crop, the usual seasonal fluctuations were very wide-eclipsed by the steady fall in prices due to the slump in the cardamom trade. Thus the weighted average price declined from Rs. 184.73 per kg. in October 1978 to Rs. 129.41 per kg. in May 1979.

The following table gives the percentage difference between the maximum and the minimum prices of the annual mean in the three States during the period 1975–76 to 1979-80.

TABLE No. 6

Percentage difference between the maximum and the minimum prices of the annual mean for 1975-76 to 1979-80.

Year	Kerala	Karnataka	Tamil Nadu
1975–76	25.30	47.74	34.59
1976–77	41.86	34.05	50.83
1977–78	22.06	36.78	44.12
1978–79	30.99	21.25	32.47
1979–80	45.64	39.97	66.57
	33.17	35.96	45.72

Average for the period of 1975-76-1979-80.

It will be noticed that the average of the percentage difference between the maximum and the minimum prices of the annual mean was the lowest in the Kerala State showing once again that auction centres in Kerala were providing a much more stable prices than those of the other two States. This phenomenon also explains the reasons for the growth of the auction centres in Kerala pushing back the auction centres of Tamilnadu where the month-wise fluctuations are the highest. Another important inference is that the range of variation in the monthly prices is generally so wide as in the case of other agricultural commodities and cardamom is no exception. The price movements at the cardamom auction centres in the year 1978–79 deserve a special study in as much as the percentage difference between the maximum and the minimum prices of the annual mean was the lowest in all the three States. The main reason for this was a better degree of blance between demand and supply in india and abroad. The world production estimated for the year 1978-79 was about 7400 M.T. out of which about 5700 M.T. might have entered the world market which is supposed to be the normal supply.

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Rape Of Our Forests

"Do not axe these oaks, pines. Nurture them; protect them From these trees the streams get their water and fields their greenery. Look, how this flower smiles in the forest."

-A Garhwali folk song.

"When the cold rains kept on and killed the spring, it was as though a young person had died for no reason."

-Ernest Hemingway.

From the windswept plains of the American mid-west to the Himalayas is a long way. But between Hemingway's observation and a Garhwali folk song there is a fusing of souls who have watched nature at very close quarters aud know in their sensitive minds what the mystique and ethos of nature is all about.

Today, however, little sensitivity is required to see and understand the havoc that has caused to our environment by indiscriminate and brutal felling of trees. In the last three years, a bitter cold rain keeps spring away in a greater part of the Himalayas. And many a young thing dies. The reason: with receding forests greater areas of low pressure have been created which suck in air from the barren wastes of the north and cause it to precipitate on the barren hills of the central Himalayas.

Nearly one-quarter of the earth's surface is covered by forests. By 2000 A. D. only one-fifth of this is expected to remain. In India, more than half of the country's total land area is afflicted with environmental problems, according to the latest report on forestry in India. The report claims that as much as 175 million hectares out of the country's total land area of 304 million hectares has been affected.

"The losses to the country on account of the continuing degradation of its land resources are of staggering dimensions and constitute one of the important threats to economic progress," warns the report. Mr. B. B. Vohra, chairman of the National Committee on Environmental Planning (NCEP) drove the nail harder into the coffin when he said: "India is left with only 30 million hectares of good forests as against the paper figure of 75 million hectares."

Along the road in Manali timber is piled high waiting to be carried away in trucks

Vohra has for some time now been trying to get public opinion around to visualize the disaster that awaits the country. He estimates that 6,000 million tonnes of top soil, exposed to the elements because its tree cover has gone, is washed away annually. Seven percent of the country's cultivable land has become barren. In more concrete terms this land could have produced half the country's annual requirement of foodgrain.

In one assessment, Vohra estimated that it would cost the country Rs. 50,000 crores to put the land and forests back in order. The Economic and Scientific Research Foundation says that out of a total of 306 million hectares of cultivable land nearly 45% is "seriously threatened with erosion and is desperately in need of soil and water conservation measures, as is the quarter of the entire forest area in the country."

High siltation in river beds caused by increasing erosion have put in extreme danger at least 39 major river valley projects which, according to one calculation, generate more than half the country's power requirements and irrigate a quarter of cultivated land. Because of this unchecked siltation river beds of all the major rivers have risen alarmingly. The Brahmaputra bed has risen by 14 feet, the Ganga and Jamuna and their tributaries in similar proportions and the rivers of the Punjab are now in spate nearly every year.

The National Commission on Floods has estimated that more than 40 million hectares will come under floods every year in this decade which is double the figure for the past. In money terms the damage caused by floods has nearly touched the Rs. 1,000-crore mark annually and is expected to go up every year in geometric progression.

BHARAT DOGRA in his report from Garhwal says: The single most important factor responsible for the deterioration in the lifestyle of villagers there is the steady deforestation. This unchecked felling of forests is forcing villagers to go as far as ten kilometres to get their fuel and fodder requirements. The economy of this region used to be dominated by animal husbandry but with the depletion of forests and the consequent erosion of the soil there is no grass for fodder now.

As a consequence the number of animal has come down and the ready supply of organic manure reduced. This has inadvertently affected agricultural production and even after the introduction of chemical fertilizers the crop yields have not been as good as they used to be. Widespread felling of oaks which store rain water (upto 1,000 litres per tree according to one estimate) and release it to springs in the dry season, has led to the thinning of water resources and in some cases springs have completely dried up.

But the main danger in the Garhwal Hills has been in the form of erosion. Deforestation has aggravated the damage from natural disasters, specially landslides and floods. The Himalayas are prone to landslides because of their young and weak and unstable geological formations. This susceptibility has been increased by this indiscriminate blasting work being carried out by road and dam builders.

Disastrous floods took place in August 1978 in Uttarkashi and Tehri Garhwal districts when landslides in the upper reaches of the Bhagirathi water system formed two artifical lakes by blocking the flow of the water. When these lakes breached the landslide-created walls, thousands of cusecs of water charged down the valleys that make up this river system. Massive flooding gobbled up villages and fields, important roads and bridges were swept away, the Maneri hydroelectric project was damaged.

But this was a minor disaster compared to what would have happened if the lake formed at Kanodia Gad had suddenly burst. Like the Great Ganga floods of the late 19th century, the entire Gangotic plain upto Allahabad would have been inundated.

Another sphere where forests have become victims of quick money operations are the limestone quarries, specially in the Mussoorie hills area. According to A,K. Sinha of the Wadia Institute of Himalayan Geology, Dehra Dun, "At present, the most striking environmental hazard (in the mineral exploitation of the Himalayas) is the scarcification of the land and the mining of limestone in the Mussoorie area. If this devastation is not checked with immediate effect, the future of Mussoorie; the Queen of Hills, is doomed".

K. S. TOMAR in his report from Himachal Pradesh says: This state had 30% of its total area under green cover before independence. But the merciless plunder of forests by contractors has brought down this ratio to 18%. Despite Ordinances (1981) banning free sale of timber and in effect eliminating the contractual system, widespread corruption has made a mockery of the Government's policy of nationalization of forests. (See Chief Justice Misra's ruling).

In the one-year-old regime of the present Chief Minister Ram Lall an estimated Rs. 50 crore, worth of timber has been illegally felled. To further compound the situation unscientific bleeding of pines for resin and their consequent weakening has led to the destruction of 42,000 trees in one district alone. Against a Government stipulation that cuts for resin extraction should not be more than half an inch deep, contractors openly make cuts as deep as four inches thus preparing the tree for sudden death.

In both Mussoorie and Simla, the two Himalayan resorts, green cover has been drastically reduced by unscrupulous builders in blatant collaboration with the municipal authorities. More than 400 oaks come under the axe in one estate alone In Mussorie where a much advertised multi-storied flats scheme is underway. Legal proceedings by local people were to no avail as they either succumbed to the big money operators of ran out of cash to litigate.

—Bats, monkeys, rhinoceros, porcupines and tree squirrels are to be strictly preserved and forests must not be destroyed either for mischief or to destroy living creatures" is the edict of the great emperor Ashoka carved in stone

Courtesy: — India 2000
vol.1 No.2 March 1983

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JAL-1-83

Industry Snippets

Liquid Gas for Automobiles

Hundreds of automobiles in the Algerian capital are running on liquid gas whose price is half that of petrol.

Though the project is in an experimental stage, the number of these vehicles is planned to reach 2,000 by this year end. If the tests prove satisfactory, around 10,000 automobiles are expected to be adapted to liquid gas.

The project would be quite usual were it not for the fact that it is being developed in a country which produces large qualtities of oil.

The estimated Algerian reserves of oil are believed sufficient to meet not only domestic needs over a longer period but also to remain, along with natural gas the conutry's largest export item and main source of foreign exchange.

Algeria's gas reserves, for larger than oil deposits, are estimated at 3,700 billion cubic metres, sufficient for the next 60 years.

New Heart Scanning Technique

An experimental technique that produces clear pictures of a living human heart could be used to diagnose cardiology problem and other diseases without X-rays, drugs or surgery, according to researchers.

"We have enough experience at this point to tell it works", Dr. Peter Lanzer said at a meeting of the American College of Cardiology. A cardiology fellow at the University of California's San Francisco campus, Dr. Lanzer worked with nine others to study, test and perfect the technique.

The scanning procedure, nuclear magnetic resonance (NMR) has been used on an experimental basis since November to look at a variety of abnormalities in patients, including damage from heart attacks, atherosclerosis of major blood vessels and disease in the sac surrounding the heart.

Traces of Neolithic Life Found

An expedition in Southern Tibet has reported finding traces of primitive humans who lived in the neolithic age, 4,000 to 9,000 years ago, reports Xinhua.

Xinhua said the expedition had found stone axes, chisels and other chopping tools left on the eastern slope of the 1,300-metre Mount Namjagbarwa.

Excessive Intake of Garlic May Affect Male Reproduction

Excessive intake of garlic may result in severe damage to the testes, and result in stoppage of sperm production and decrease in testosterone (the male hormone) secretion, according to the researchers Mr. V. P. Dixit and Mr. Suresh Joshi of the Reproduction Physiology section of the University of Rajasthan. The extent of the testicular damage depends on the dose and the duration of intake. While 45 days administration resulted in degenerative changes, after 70 days, administration, they led to serve damage of the testes and stoppage of sperm genesis. While substantiating the earlier claim that garlic decreased blood cholesterol and blood sugar, they demonstrated that these results were associated with severe testicular damage in animals, on which experiments were conducted.

Alcohol from Sweet Potato

The Central Tuber Crops Research Institute at Sreekaryam which has successfully experimented with tapioca for producing alcohol has now turned its attention to the sweet tuber for producing the same.

Its director said that the institute proposed to set up a pilot plant to experiment with sweet potato as well as to find out the improvement possibilities of the tapioca process by using superior cultures of yeast. He also said the project report of the tapioca project has already been handed over to the state government which is understood to be planning to set up a plant for this at the Chittur Sugar Mill at a cost of Rs. 62 lakh.

Meanwhile, the National Research and Development Corporation, the Central Government agency engaged in the transfer of know-how developed by the research institutions to the industry was understood to have approached the State Government-owned drugs and pharmaceuticals for setting up a proving plant under it.

Studies on Sugarcane Alcohol as Fuel

The scientists at the world famous Sugarcane Breeding Institute whose cane varieties are in use in 30 countries and occupy 80 per cent of the cultivation within the country are now busy producing sugarcane varieties suited to meet the energy crisis.

Experiments are in advanced stage trial at the institute to identify and multiply varieties producing alcohol, which is an important fuel. In Brazil alcohol is mixed with petrol it is said.

The Director of the Sugarcane Breeding Institute, said, alcohol produced from sugarcane by suitable fermentation and ditillation processes, unrecovered sugars being carbohydrates are high energy resources and can be converted into alcohol.

Under a research programme initiated by the I. C. A. R. in collaboration with National Sugar Institute Kanpur, and Sakthi Sugars Ltd., Tamil Nadu, 20 genotype were selected by the Sugarcane Breeding Institute. In the trial two sugarcane varieties, Co. 7704 and Co. C. 671 recorded higher total sugars than Co. 419 varieties and Co. 62175.

Fermentation efficiency ranged from 82 percent to 87 percent. The average estimated alcohol yield from 8, 818 kg, per hectare to 15,602 kg. per hectare depending on the time of harvest, the lowest yield when the crop was harvested after 240 days and the highest yield at 360 days.

Encouraged by these results the institute is now strengthening its breeding programme to evolve new types of sugarcane hybrids which could give maximum alcohol per unit areas.

Air Cleaners For Food Industry

Electronic Air Cleaners-called Electro-Cell may be used to remove smoke, haze, mist, and fumes generated by food processing operations. By recirculating air cleaned of these contaminants excessive energy used to heat or cool make-up air is minimized, resulting in savings. The air cleaners operate on the principle of electrostatic precipitation. Contaminated air is drawn into the unit and first passes through a high intensity electric field created by imposing a positive charge of approximately 14,000 V (DC) on the ionizer wires. Particles are positively charged in this field and then they enter a second electric field of approximately 6,800 V (DC) where they are attracted to and collect on grounded plates. The clean air passes through the air mover and into the return duct system. The air cleaners must be washed periodically to remove contaminants from the collecting plates and several cleaning options are available. The units have air cleaning capacities of 8,000 to 1,95, 000 cu ft/min., and are available in a number of design configurations.

New Tube For Paste

A new toothpaste is packed in a tube made of plastic and aluminium laminate. Although there are both plastic and aluminium tubes on the market, this is the first time a laminate of two has been used for toothpaste in Australia, and is expected to be very popular.

Because it is more flexible than other tubes; the tube is less likely to split; and there is less chance of the toothpaste coming out. The manufacturers claim that there is also less product wasted because the tube's flexibility allows much more of the toothpaste to be squeezed out.

News Shorts

Visit of Additional Secretary Commerce

The proposal of the Cardamom Board to provide cash compensatory support for export of consumer packs of cardamom from the present 2 kg limit to 5 Kg may be favourably considered by the Govt of India. This was said by Shri C Venkataraman, Additional Secretary, Ministry of Commerce at a meeting of the representatives of Cardamom Plantation Industry, senior officers of the Cardamom Board Export Inspection Agency, Export-Import Trade Control etc in Cochin recently.

The Additional Secretary also said that the question of exemption of cardamom from Sales Tax, will be taken up with the concerned state governments by the Government of India in view of the high price of Indian Cardamom in world markets and the severe competition faced by Indian Cardamom from other cardamom producing countries like Gautemala.

Shri K Mohanachandran, Chairman of the Cardamom Board explained in detail the problems faced by the industry today. The unprecedented and prolonged drought in the cardamom growing belts has considerably brought down the production of cardamom in India. The severe competition from the other producing countries in the foreign markets have also greatly affected the Indian Cardamom industry.

Shri Mohanachandran suggested a two pronged strategy to tide over the present situation. Firstly, as a short term measure every effort should be made from all sides to bring down

Shri C Venkataraman, Additional Secretary, Ministry of Commerce (seated middle) is seen discussing with the representatives of cardamom plantation industry, senior officers of the Cardamom Board, Export Inspection Agency and Export Import Trade Control, etc. The meeting was held at MPEDA hall, Cochin recently.

Representatives of the Cardamom Board, Export Inspection Agency, and others with Shri C Venkataraman, Additional Secretary, Ministry of Commerce at the meeting held at Cochin recently.

the existing export prices at least on par with our overseas competitors and secondly, he suggested, a long term measure to achieve optimum productivity of the plantations. The representatives of UPASI, Federation of Cardamom Growers Associations, Association of Planters of Kerala, Cardamom Traders Associations from different parts of the country who attended the meeting also spoke on the problems faced by the cardamom industry.

Besides requesting for enhancement of cash subsidy scheme for consumer packages exported, and exemption of cardamom from state taxes, the representatives also appealed for more assistence for New Planting and Re-planting schemes, and drought relief subsidies as in the case of Rubber. They also asked for assistance for hire purchase of sprinklers for cardamom, 50% subsidy on air-freight, liberalisation of credit facilities and to undertake aggressive market promotion programmes abroad.

Shri Venkataraman assured that the government would examine all the proposals most favourably and try to help the cardamom industry to the maximum. He also promised to get cleared at the earliest the Replantation Subsidy Scheme submitted by the Board for improving the productivity of the existing cardamom plantations.

Delegations to WANA Countries

Indian Consulate in Dubai and Indian Embassy in Abu Dhabi have informed that several delegations from India visiting UAE to explore export potentials for Indian goods, have approached them for fixing appointments with local Chambers of Commerce and other importers/traders. Accordingly, they fixed meetings with Chambers of Commerce, importers and traders, arranged hotel accommodation for the delegates and even helped them in arranging visas. However on account of certain difficulties of their own visiting delegations changed their programme at the last moment which caused considerable inconvenience and embarrasment. Both our Consul General at Dubai as well as our Ambassador at Abu Dabi have expressed their dissatisfaction over these last minute concellations.

It must also be noted that any programme of visit to WANA countries by any delegation of exporting interests be finalised only after careful planning and only in consultation with our Missions in those countries. Once a firm programme is fixed, every effort must be made to adhere to it as any last minute change of such programme would cause inconvenience and embarrasment to our Missions in those counties. It can easily be conceived what discomfiture our missions have to face if the appointments and meetings with local Chambers of Commerce, importers etc. are cancelled at the last moment. The local organisations too make necessary arrangements to receive the expected delegations and last minute cancellation or postponement of dates also causes much inconvenience to them. Further, if instances of such occurences become frequent, our Missions over there would lose credibility in the eyes of the local trading interests, and consequently leading to difficulty to make appointments in future.

It is therefore, requested that whenever any programme of visit by any delegation from India to any of the countries in the WANA (West Asia & North Africa region) is finalised, every effort should be made to ensure that the visit of the delegation takes place as scheduled.

It is the practice of some of the Embassies of Arab countries in India to refer to their home Government before they issue any visa to the visiting Indian businessman. In such cases, our Missions in those countries are often approached, to assist in arranging visas for them. Hence, it would be advisable to forward to the respective Missions full particulars of the members of the delegation, as shown below, atleast six weeks in advance, to avoid any last minute complications and postponements.

a) Full name, with father's name.
b) Place and date of birth.
c) Passport number, place and date of issue.
d) Profession as shown in passport.

Saudi Govt. Bans Meat From India

Saudi Arabia has banned the import of livestock and meat from India.

The Saudi Commerce Ministry announced that the decision was taken after it was established that plague cases were spreading among Indian cattle.

An official said Indian meat was inedible because the animals slaughtered were very old and exhausted by agricultural work.

Bahrain had last month banned the import of chilled Indian meat as a random check revealed that much of it was "highly contaminated". About one tonne of Indian chilled meat, mainly lamb and buffalo, used to arrive in Bahrain every week for sale.

Duty-Free Export Facility Restored

Government of India has decided to continue the facility of clearing export goods duty-free after manufacturers execute a bond under rule 13 of the Central Excise Rules. The facility earlier conceived as an export promotion measure was withdrawn a few months ago. causing great hardships to manufacturer-exporters.

Manufacturer-exporters had to pay the full amount of duty and then claim it later. This used to lock up funds, besides resulting in inordinate delays in the settlement of rebate claims by the Central Excise Department.

The Central Excise Department has also decided to extend the period for returning damaged or defective goods received by a party from his original manufacturer, from the present 30 to 90 days, a facility obtained under Rule 192 of the Excise Rules.

The question whether such goods are defective or not can be determined after an inspection in the factory concerned For this purpose, the use of certain machinery may become necessary.

Cardamom Seedlings at Subsidised Rates

High quality Cardamom Seedlings will be supplied by Cardamom Board at subsidised rates to all registered cardamom growers. Those growers who are desirous of purchasing seedlings from Departmental Nurseries should submit their applications along with the Cardamom Registration Certificate to the concerned Field officers/Junior Field officers/Assistant Farm officers of the Cardamom Board of the area before 20-5-83. The prescribed application forms will be available in all field units/nurseries, Zonal Offices (Ernakulam, Mercara and Bodinayakanur), Regional Office (Saklespur) and Head office Ernakulam of the Cardamom Board.

The application for allotment of seedlings may be submitted to the Field officer, Junior Field officer or Assistant Farm officer, Cardamom Board of the area where the concerned nursery is located along with 25% of the cost of seedlings applied for as advance payment by Demand Draft only, drawn in favour of the Secretary, Cardamom Board. Ernakulam in any of the Nationalised/Scheduled Bank having its branch in *Ernakulam*.

Based on the availability of the seedlings in the nurseries, the concerned Deputy Director/Assistant Director in-Charge of the Zone will allot the seedlings, and the successful applicants have to remit the balance cost of seedlings by Demand Draft by 10-6-1983 or on a convenient date fixed by the allottee and the officer-in-Charge of the nursery. If the allottee fails to pay the balance amount (less of advance amount) within the prescribed time and/or fail to lift the seedlings, the advance remitted shall be forefeited.

Price Details (at 50% subsidised cost):

A. KERALA REGION

(1) 10 months old Rs. 0.42/seedling

(2) 18 months old Rs. 0.93/seedling

B. KARNATAKA REGION

(1) 10 months old Rs. 0.42/seedling

(2) 22 months old Rs. 0.93/seedling

(3) 36 months old Rs. 0.93/seedling

C. TAMILNADU REGION

18 months old Rs. 0.93/seedling

New Export Promotion Body in Tamil Nadu

The Tamil Nadu Government has contituted an export promotion committee under the chairmanship of the Commissioner and Secretary of the Industries Department to periodically review the problems encountered by exporters.

The Committee, set up following a directive from the Centre, is to stimulate exports and maintain a close co-ordination between the Central and State governments.

The broad terms of the committee are:

To advise the government on the measures to be taken for successful implementation of export promotion and export policy, to review specific problems and difficulties faced by exporters and suggest remedial measures.

(Continued on page 23)

Fairs and Exhibitions

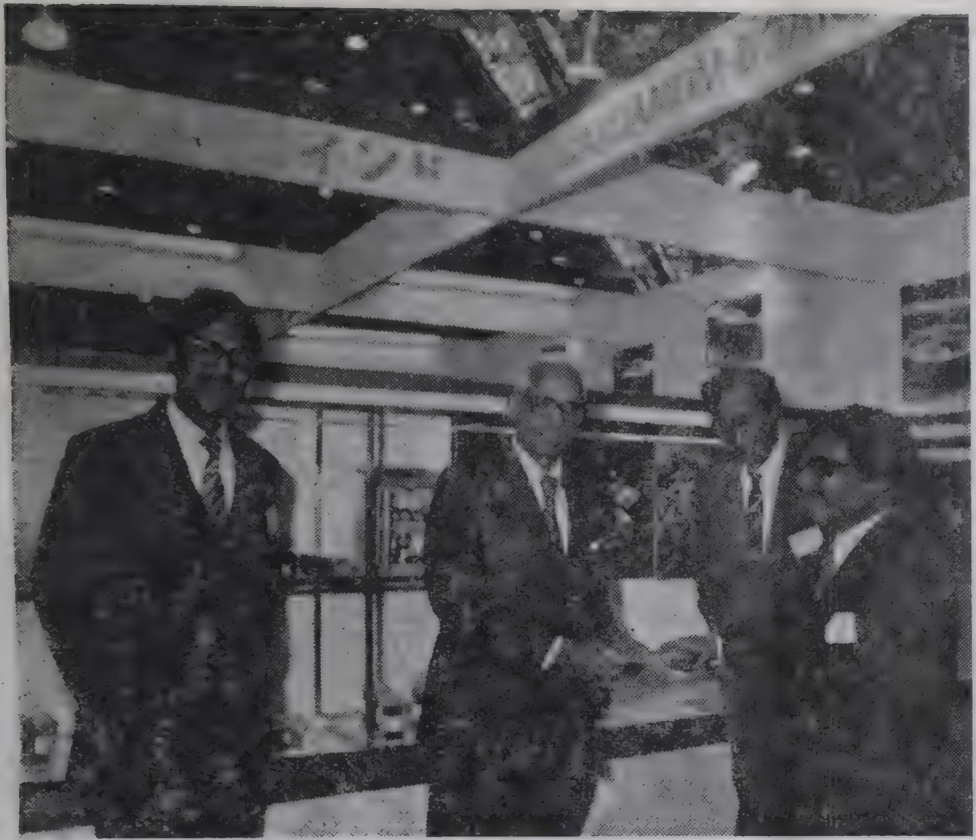
CARDAMOM BOARD IN HOTERES & FOODEX FAIR

Cardamom Board participated in the Hoteres & Foodex Fair held at International Trade Centre, Harumi, Tokyo from March 4-18, 1983. The five-day Fair is the 11th International Hotel and Restaurant Show and the 8th International Food Exhibition organised by the Japan Management Association and sponsored by the Japan Hotel Association, Japan Ryokan Association, Japan Tourist Hotel Association, Japan Tourist Accommodation Association and Japan Restaurant Association The Fair assumes greater importance for the hotel, catering and food industries in Japan and other Asian countries. Various food products beverages, alcoholic drinks and catering and hotel equipments were displayed at this Fair.

A view of the Cardamom Board pavilion in the Hoteres & Foodex '83 fair held at Tokyo from March 14th to 18th.

Cardamom Board has been participating in this International Fair since 1977. and this is the 7th consecutive year the Board is taking part. A total number of 680 exhibitors from 19 countries including Japan displayed and demonstrated their products in this fair which attracted more than one lakh visitors India's participation was organised by the Trade Fair Authority of India New Delhi with the active Co-operation of the Embassy of India, Tokyo. Seven national organisations viz. Cardamom Board, Coffee Board, Tea Board, Marine Products Export Development Authority, Cashew Export Promotion Council, Processed Foods Export Promotion Council, State Trading Corporation of India and one exporting form viz. M/s. Randrian Ltd , Calcutta participated from, India, and they constituted the India pavilion.

The exhibition was inaugurated by Mr. Akhira Totoki, Chairman of the Japanese Management Association on 14th March 1983. On March 16th a press conference was covered in the exhibition premisses by the participating orgnisations from India and the Indian Embassy, in order to publicise India's participation and to brief the export potential of India's food products to Japan.



Shri N D Cheriankunju. Statistical Officer, Cardamom Board is seen presenting complimentary packets of Cardamom to Shri K P S Menon (Jr), Indian Ambassador to Japan during the latter's visit at the Boards pavilion in the Hoteres & Foodex fair 1983, Tokyo. Others in the photograph are Shri N N Kesar (extreme left) Director, India Pavilion, Trade Fair Authority of India, and Shri C N Venkatraman (third from left), Assistant Director, Coffee Board.

The Cardamom Board's pavilion was quite impressive to the visitors. Different grades of Indian Cardamom, cardamom flavoured products, model of cardamom plant, copy panels, photographic panels on the different end-products using cardamom etc. were displayed in Board's stall. In addition to cardamom, other spices were also displayed. Cardamom flavoured coffee and tea was also served to many visitors through coffee/tea Board stalls. Pamphlets in Japanese language, on the various uses of Indian Cardamom were also distributed to the visitors. Shri N. E. Cherian Kunju, Statistical Officer, Cardamom Board represented the Board at the Exhibition.

Shri K P S Menon (Jr) (left) Indian Ambassador to Japan is being briefed on cardamom products by Shri N E Cheriankunju Statistical Officer, Cardamom Board at the Boards pavilion In the Hoteres & Foodex Fair 1983. held at Tokyo Shri NN Kesar, Director Indian pavilion, TFAI is seen in the middle.

(Continued from page 21)

Baggage Rules Relaxed

With the announcement of the budget for 1983-84, the Govt. of india has relaxed the baggage rules by enlarging not only the list of items which can be imported duty free but also by increasing the value limit for free imports and reduction of duty on higher imports.

The articles which can be imported free of duty (within duty free limits of baggage) include air conditioners, refrigerators, video and TV sets, cooking or washing machines, two-in-one sets, cassette and sound recorders and cameras including movie projectors Thus the only articles not exempted from duty are—

Motor cycles, scooters or mopeds.
Cigarettes exceeding 200 Nos. or
Cigars exceeding 50 Nos. or
Tobacco exceeding 250 gms and
Alcoholic liquor in excess of 0.95 litre.

The value limits and the duty leviable will now be as follows:

Upto a value of Rs. 1250/-.	Free
Above Rs. 1250/- but upto Rs. 2,000/-.	165%
Above Rs. 2,000/-.	235%

Statistical Abstract March 1983

Production

The latest assessment of field position indicates that the production for the current season 1982-83 would be 2900 M.T with State-wise break-up as follows:

Kerala	1900 M.T
Karnataka	800 M.T
Tamilnadu	200 M.T
Total	2900 M.T

Auction Sales and Prices

The State-wise auction sales and prices of Cardamom during the current year and previous year are given below:

State	March '83		March'82		August-March'83		August-March '82	
	Qty (M.T)	Av. price (Rs/kg)	Qty (M.T)	Av. price (Rs kg)	Qty (M T)	Av. price (Rs kg)	Qty (M.T)	Av. price (Rs/kg)
Kerala	43	194.98	43	125.42	1208	158.30	2184	121.36
Tamilnadu	5	177 17	9	98.17	64	151.23	100	94.16
Karnataka	57	186.95	53	135.20	642	157.26	748	102.16
Total	105	189.83	105	128 09	1914	157.71	3032	115.72

It may be seen from the above table that auction sales during March '83 was equal to that of March '82 recording a sale of 105 M.T. But the average price during March '83 has gone up to Rs. 190/- per kg from Rs. 128/- per kg during March '82. The cumulative auction sales during August-March '83 was 1914 against 3032 during August–March '82 indicating 37% decrease in terms of quantity compared to previous year. This is mainly due to the fall in production and the consequent poorarrivals in the main auction centres of Kerala, Karnataka and Tamilnadu during the current season compared to previous season.

Export

Month-wise provisional figures of export of Cardamom during the current financial year with comparative figures for the previous year (1981 82) are given below:

It is seen from the statement given below that export both in terms of quantity and earhings decreased sharply during April-March' 83. when compared to the performance during April to March '82. The main reasons for the decline in export are lack of sufficient orders from Middle East due to availability of stock during the off season, severe price competition from Guatemala, drastic reduction in crop production during 1982-83 due to drought. higher price in domestic market etc. The unit value realisation has gono up by Rs 36/- per kg during the current year compared to last year.

Month	1982-83			1981-82		
	Qty (kgs)	Value (Rs)	U Value (Rs/kg).	Qty (kgs)	Value (Rs)	U. Value (Rs/kg)
April	42195	5992441	140.02	278077	32166011	115.70
May	75026	11433006	152.39	97866	10812936	110.49
June	14950	1696977	113.51	120547	13607627	112.88
July	104435	13835246	132.48	1122335	14654746	130.57
August	20783	2924509	140.72	79062	10089187	127.61
September	20330	3758632	184.88	117109	14901138	127.24
October	51503	7605284	147.67	131940	17409648	131.95
November	126146	28195373	223.51	469400	65508771	134.56
December	256203	40082530	156.44	354919	47886319	134.92
January	60073	10569903	175 95	333770	45734979	137.02
February	133036	24118096	181.29	116694	14716939	126.12
March	95582	15992272	167.31	109233	14212679	130.11
TOTAL	1000262	166204269	166.16	2320852	301700980	130.00

Source : Report from Customs Authorities based on shipping bills passed and cess collected.

INTERNAL MARKET PRICES

a) Small Cardamom

The internal market prices prevailed for different grades of cardamom at Bombay and Mangalore markets during March 1983 are given below.

Bombay

Variety	Price (Rs/kg)
AGEB	215-270
AGB	205-235
AGS	195-220
AGS 1	190-215
AGS 2	175-190

Mangalore.

Variety	Price (Rs/kg)
CGEB	200-235
CGB	195-230
CG 1	190-225
CG 2	185-210
CG 3	180-200
CG 4	150-185
BW 1	220-226
BW 2	195-196
BL 1	225-231
BL 2	198-201
CS 1	185-192
CS 3	110-115

Source: Directorate of Marketing and Inspection, Bombay / Mangalore.

b) Large Cardamom

The average price prevailed during the month of March '83 for various grades of Large Cardamom are given below.

Variety	Prices (Rs/Kg)
Bada Dana(Kanchicut)	20.77
Bada Dana(with tail)	19.42
Chota Dana	18.30
Bhutan Variety	18.91
Nepal Variety	18.68

AUCTION SALES AND PRICES OF CARDAMOM

Centre	March '83			March '82			August—March 1983			August—March 1982		
		Prices (Rs/kg)			Prices (Rs/kg)			prices (Rs/kg)			Prices (Rs/kg)	
	Qty. Sold (kgs)	Max:	Average	Qty. Sold (kgs)	Max:	Average	Qty. Sold (kgs)	Max:	Average	Qty. Sold (kgs)	Max	Average
KERALA												
Vandanmettu	40072	226.00	196.36	37510	180.00	127.52	812259	401.00	161.91	1288684	243.40	124.18
Santhanpara	3266	199.40	178.01	3056	136.10	104.03	241126	222.00	147.73	417413	172.30	109.33
Udumbanchola	—	—	—	—	—	—	—	—	—	1273	127.60	113.97
Kumily	—	—	—	2885	152.00	120.81	133227	370.50	156.22	19273	161.10	127.03
Kallar	—	—	—	—	—	—	3618	159.00	139.13	—	—	—
Cochin		—	—	—	—	—	17381	250.00	155.87	15893	169.00	110.42
Kajanapara	—	—	—	—	—	—	—	—	—	20860	148.90	110.70
Total (Kerala)	43338	226.00	194.98	43451	180.00	125.42	1207611	401.00	158.30	2183797	243.40	121.36
TAMILNADU												
Pattiveeranpatti	4791	206.00	177.17	6805	161.10	110.25	60108	246.00	153.08	62942	161.10	104.31
Bodinayakanur	—	—	—	1907	132.10	55.05	4264	178.00	125.20	36761	135.00	76.79
Total (Tamilnadu)	4791	206.00	177.17	8712	161.10	98.17	64372	246.00	151.23	99703	161.10	94.16
KARNATAKA												
Somwarpet	196	225.00	188.76	—	—	—	196	225.00	188.76	478	95.00	83.24
Mercara	8537	225.00	189.36	6171	172.50	140.52	59315	240.50	156.56	83066	172.50	108.85
Mangalore	5548	215.50	183.15	7188	160.00	132.25	42777	225.00	165.57	100392	160.00	105.73
Saklaspur	41202	244.00	187.11	38661	200.00	135.03	507540	250.50	157.41	537610	244.00	100.81
Sirsi	715	211.99	180.06	285	147.00	138.00	23009	230.99	145.37	21981	176.99	95.76
Siddapur	266	215.19	180.46	628	147.99	125.99	9118	225.61	142.37	5124	151.85	94.88
Total (Karnataka)	56464	244.00	186.95	52933	200.00	135.20	642486	250.50	157.26	748651	244.00	102.16
Grand Total (India)	104593	244.00	189.83	105096	200.00	128.09	1914469	401.00	157.71	3032151	244.00	115.72

Source: Reports received from Licensed Cardamom Auctioneers

CULTIVATION OPERATIONS

JUNE	South-West Monsoon areas (Kerala-Tamilnadu)	North-East Monsoon areas (Tamilnadu)	South-West Monsoon areas (Karnataka)
Primary Nursery	Third round weeding continued-routine plant protection measures-watering according to necessity depending on rain.	Watering according to necessity-plant protection measures-repair and maintenance of beds, pandals etc.	Remove the pandal cover depending on receipt of Monsoon rain-removal and storage of pandal framework. If weather permits uprooting of seedlings for transplanting in the field.
Secondary Nursery	Watering as required-removal of shade pandals in the site for next season's nursery, formation of beds and erection of pandals.	Watering if required-plant protection measures-aprooting of well grown secondary seedlings for planting in field if weather permits.	Removal and preservation of pandal materials Lifting of seedlings for planting in the field.
Starting of New Plantations	Filling up of pits if summer showers have been delayed. Planting shade trees if shade is not adequate.	Planting if weather permits-staking and mulching.planting shade trees where necessary.	Planting seedlings-mulching with dry leaves and staking the plants.
Maintenance of Plantations	First round weeding and trashing continued and completed-thrips control. planting shade trees where necessary manuring if summer showers are late.	First round weeding mulching and earthing up. Thrips control.	Filling up of vacancies preferably with two year old plants-mulching and staking

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Cardamom Plantation Industry faces severe crisis due to drought

The text of the speech delivered by Shri K. Mohanachandran, IAS, Chairman at the Cardamom Board meeting held at Bangalore on 24th May 1983.

Friends,

I have great pleasure in inviting the Honourable Members of the Board to the 43rd Meeting of the Cardamom Board today. Let me extend a special welcome to the Honourable Members of the Parliament who had taken the trouble to attend this meeting amidst their multifarious responsibilities. I am sure that their knowledge and experience will contribute a lot in solving problems of the Industry. Let me also extend a special welcome to the large number of special invitees whom I had invited to be present for the Meeting as we have to discuss very important problem of drought which has affected the Industry. I am happy that Smt. Aruna Makhan, Director (Finance), Government of India and Shri B.M.S. Negi, Under Secretary, Ministry of Commerce, Government of India have found it convenient to attend this meeting. I extend a special welcome to them and I am sure their presence in the meeting will help us to get their support for the various schemes and proposals coming from the Board to the Government.

As far as the Cardamom Industry is concerned, the Cardamom Plantation Industry is at present facing a severe crisis as a result of the drought situation in the cardamom growing areas in Kerala, Karnataka and Tamil Nadu. During the last year itself, the rainfall was comparatively poor and this had affected production of cardamom in 1982 - 83. But this year there has been a continuous drought from December onwards, there was practically no rainfall from December 1982 to April 1983. The usual summer showers in March and April which is very crucial as far as cardamom plant is concerned was totally absent this year and this will affect the yielding of the crop. Apart from the effect on the crop, severe drought has dried up plant population in most of the areas, to a considerable extent. In areas having less shades and where there are rocky patches, the plants have completely dried up and have fallen down. In some areas, the cardamom estates are completely dried up. The Board had requested its Field Officers to make an assessment of the crop damage as well as plant loss as a result of the drought. I have also travelled in many affected areas and visited the affected plantations and had discussions with the farmers. In some Villages, the damage is estimated to the level of 60 to 70 per cent while in some other areas, the damages are estimated to be 30 per cent. In the Karnataka area, the extent of damage to the plant population is estimated to be about 50 per cent. In Kerala area, the extent of damage varies from Village to Village while the damage in Vandanmettu area is

INDIAN SOCIETY FOR PLANTATION CROPS

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555 pp Price Rs. 75-00 (US $ 25) September, 1980

Contains six sections, one each on nematology and microbiology and two each on entomology and plant pathology. The plantation crops dealt with are arcca, cacao, cardamom, cashew, coconut, coffee, pepper, rubber and tea. Full text of 72 papers on various aspects together with an abstract, is printed and after the papers in each session the main points emerging in the discussions and future lines of work are summarised.

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estimated to be 30 per cent, the damage in Pampadumpara and Rajakkad, Parathode etc., are estimated to be 60 to 70 per cent. The damage in Wynad is estimated to be about 50 per cent. In addition to the plant loss, it is estimated that there will be considerable crop loss during this year and since the affected areas are to be replanted, the loss of crop will continue for three to four years as a result of the drought. The loss of crop this year is estimated as 1200 tonnes which is estimated to cost Rs. 18 crores. In addition to this, there will be continuous loss of crop for the next three years, nearly to the tune of 40 per cent of the crop. The loss to the economy as a result of the crop loss is estimated as Rs. 60 crores. In addition to this, there is also requirement of funds to replant the affected areas. Most of the Planters' Associations with whom I had discussions felt that the area affected by the drouhgt is to be replanted. Assuming the loss of plantation to the extent of 50 per cent, the area to be replanted will be about 25,000 hectares. The cost of replanting per hectare is estimated as Rs. 10,000 - for the farmer and on this calculation, the cost of replanting the affected areas works out to Rs. 25 crores. The loss to the economy as a result of the drought, it is estimated to the order of Rs. 85 to 90 crores, on a modest estimate. This meeting of the Board is primarily called to discuss this drought situation and to decide ways and means to tackle the situation and find out the most appropriate remedial measures to reconstruct and rehabilitate the Industry. The Research and Development Committee of the Board which has been convened to discuss the situation and the measures to be taken for tackling the situation in an effective manner has discussed various measures and their minutes are before the meeting. I would propose the Board to consider the various measures to reduce the difficulties of the farmers as well as to give assistance to rebuild up the plantation afresh. On the basis of the discussions in the Research and Development Committee, we had suggested a few measures like, supply of subsidised seedlings from the Board's nurseries, enhancement of grant-in-aid and increase the number of certified nurseries, increase production of seedlings, extent of replantation subsidy scheme for the drought affected farmers etc., for consideration of the Board. The number of seedlings available in the Board's nurseries is very limited as the seedlings are also affected by drought. It is therefore necessary to take up an urgent programme of production of quality seedlings for replanting the affected areas. This can be done only next year and the year after next. The Board can discuss the various measures and take appropriate decision for the benefit of the industry.

As you know, the Board had prepared a replantation subsidy scheme and submitted to Government of India for consideration. This replantation scheme is aimed at replanting about 10,900 hectares of old and uneconomic cardamom plantations so as to improve the productivity of the plantation. This scheme was suggested by the Board because of the firm conviction of the Board that unless productivity of cardamom estates are improved, the Industry may not be able to face competition in the internal front. I am happy to inform the Members of the Board that this scheme is under the consideration of the Government of India and has come to the final stage. The Expenditure Finance Committee met on 13-5-1983 have considered this scheme and the scheme was cleared and is expected that the sanction of the Government of India will come with the least possible delay. It is the feeling of the technical officers of the Board that the implementation of this replantation scheme will help the farmers to improve the productivity of the plantations and improve the return of the farmer. Many planters Associations and experiencd planters have requested the Board to extend the benefit of the replantation scheme to all areas affected by drought so as to help them to replant the area. The Board also feels to replant the drought affected area. It is the Board to consider how the replantation subsidy scheme can be extended to the drought affected areas so as to help the farmers to replant these areas, and get some relief for them from the drought damage.

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In the field of exports, I am to inform the Board that there has been a short fall in exports in the year 1982-83 as against 1981-82 while the exports for 1981-82 was 2321 tonnes valued at Rs. 30.17 crores with a unit value of Rs. 130/- per kg. The exports for the year 1982-83 is only 1005 tonnes valued at Rs. 16.00 crores with a unit realisation of Rs. 159/- per kg. The main reason for the short fall in exports last year was the shortage of the crop as a result of the failure of monsoon in the previous season. The crop for the year was estimated only 2900 tonnes as against the previous crop of 4100 M. Tonnes. Consequent on the reduction of the crop, there has been considerable pressure for cardamom in the internal market and as a result the price of cardamom in the auctions was comparatively high. Because of this the existence of fairly high price in the internal market, the Indian cardamom could not be very competitive in the international market. The reports from Bahrain Office revealed that Indian prices were higher by 3 to 6 dollars in the international market compared to the Guatemalan prices for comparable grades. Last year we had also sponsored a Trade delegation with three exporters under the Market Development Assistance to Saudi Arabia, Kuwait and U.A.E.

As you know, the Board has approached Government of India for granting cash compensatory support for consumer packing upto 5 Kg. and the orders of the Government of India has not been received so far. We have also taken with the Government of Kerala to exempt cardamom purchased for exports from salestax so as to bring down the price of cardamom in the international market to improve our competitiveness.

The next year's crop is likely to be much lower than the last year. It is necessary that the Board should discuss an export strategy for the coming year to increase the exports.

Well, friends, I do not want to take much of your time. You have a long agenda and very important subjects to discuss. I look forward to a very useful and interesting discussion on the various important and vital subjects coming up for discussion before this august body.

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Continued on Page 29

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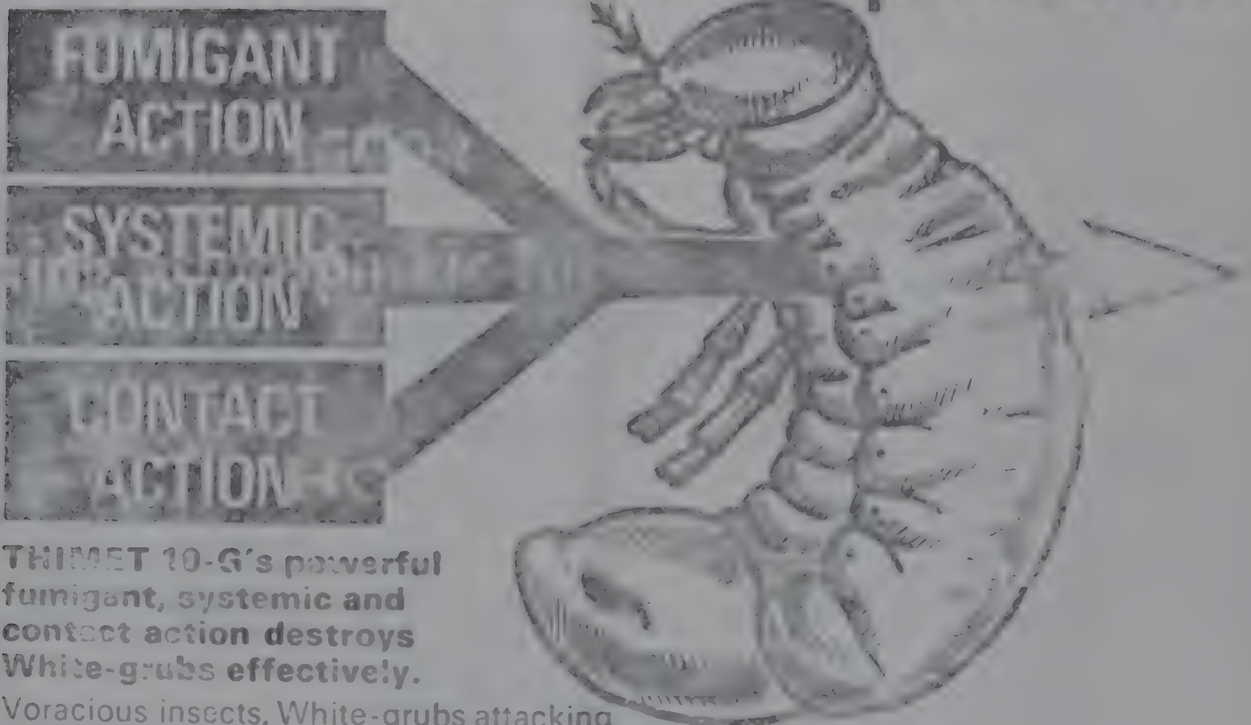

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CONTROL OF CARDAMOM THRIPS

By D Kumaresan

Cardamom is a herbaceous perennial plant (Elettaria **Cardamomum** Maton) which is commercially cultivated in India, Guatemala, Tanzania and Sri Lanka. India is the world's largest producer of cardamom accounting for about 56% of the total production (1979-80). Cultivation of cardamom is confined to the evergreen forests of Western Ghats, over an area of 94,000 hectares distributed in the States of Kerala, Karnataka and Tamilnadu. Kerala, Karnataka and Tamilnadu have 60%, 30% and 10% of cardamom area respectively whereas in respect of production Kerala, Karnataka and Tamilnadu account for 70%, 23% and 7% respectively. The total production of cardamom in India during 1980–81 recorded was 4400 MT. The productivity of cardamom in India is lower as compared to Guatemala.

Pests reduce the yields of cardamom crop and cause considerable damage to the quality of the crop. Cardamom crop is subjected to attack by a number of insect pests, (54 insect pests are recorded in cardamom crop in Southern India) among which the most important one is cardamom thrips (Sciothrips Cardamomi Ramk). The thrips play a prime role to affect direct crop loss both in quantity and quality.

Symptoms and Damage:

Thrips is a regular and persistent insect pest. Damage caused to cardamom crop by thrips is by its feeding on the tender capsules. For the purpose of feeding, thrips lacerate the tissue by mouth parts causing an injury. The exuding sap is sucked. Usually plants respond to external injury by the formation of callus tissue over it. The scabby growth appearing on cardamom capsules is the callus formed on the injured portion. The injury is inflicted in the blossom stage. It persists as scab on the fully developed capsules. Such capsules appear stunted, malformed and shrivelled with gaping slits on the skin. This condition is popularly called as "Cardamom itch". This affects adversely the shape, size, and appearance of the capsule.

The extent of thrips injury on the tender capsules is determined by the nature of adherence and persistence of the bracts around the flower and young fruits and the length of flower pedicel. A small scab formed on the tender capsule is fully developed. On drying the scab will become more prominent. Seeds of infested capsules are underdeveloped and light in weight. Such seeds do not possess the aroma of normal healthy seeds.

The injury caused by the thrips affect the yield in two ways.

1. Thrips cause shedding of flowers and tender capsules by attacking the flower stalk. When the panicle stalk is attacked, it becomes stunted in growth and production of flowers is adversely affected.

2. The quality of the capsule is affected by the thrips injured capsule in the market.

Biology:

Colonies of tiny insects live inside the bracts, leafsheath, unopened flowers, spindle of top shoot and on the panicle. The adult is a minute, elongated insect with fringed wing. It is 1.25 to 1.5 m m. in length. The adult is dark. greyish brown in colour. Parthenogenesis is is more common than sexual reproduction in cardamom thrips Thrips lay minute kidney shaped eggs singly in the tender parts of leaf sheath, panicle, flowers and on all feeding parts of cardamom plant. The oviposition period lasts for 4–25 days. The number of eggs laid during this period ranges from 5 to 30. Eggs hatch within 9–12 days. In the begining, the nymph is whitish in colour and later on turns yellow. Nymphs grow by feeding on the plantsap. After moulting thrice, it takes rest for 10–15 days and then becomes winged adult. Life cycle is completed

---

The author, Mr. D. Kumaresan, is working as Entomologist in Indian Cardamom Research Institute, Myladumpara

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in 25-30 days. Summer months are favourable for the quick multiplication of the insect. Various stages of thrips viz., nymphs, pre-pupa, pupa are found within the perianth round about ovary: these stages are sluggish and glassy transparent appearance; and their movements are sinuous. Adults are also comparatively sluggish and rarely take to flight. The thrips appears to be not one of the purely blossom-infesting types, but occurs also inside the spindle of the top shoot in small numbers.

Experiment:

Considering the severity of the pest problem, experiments were concucted at Indian Cardamom Research Institute, Myladumpara with different insecticides and dose (Table-1) to find out their efficacy at minimum dose. All insecticides were sprayed at 0.025% a. i. and 0.05% a. i. except chlorpyriphos using a high volume spray. A schedule of seven insecticide application were done with an interval of forty days, starting from March 1979 and April 1980 using 500 ml. spray volume per clump.

From the data obtained in the present studies it is clear that fenvalerate 0.025% 0.05%; quinalphos 0.025% and 0.05%; monocrotophos 0.025% and 0.05%; methamidophos 0.05%; dimethoate 0.05%; phosphamidon 0.05% and chlorpyriphos 0.05% were able to reduce the infestation by more than 70% over the control (unspray).

To get higher yield and profit from the cardamom plantation, planters are advised to take up plant protection operation at correct time, with correct dosage and quantity of insecticides. It is advisable to take up spray application whenever water is available even during summer months, since dusts are more harmful to bees. □

Table 1 **Chemical Control of Cardamom Thrips (Average of two years experiment data)**

Sl. No.	Treatments	Dosage (% a. i.)	Percentage of thrips damage on capsules	Order of Relative efficacy
1.	Penvalerate (Sumicidin 20 EC)	0.025	16.71	8
2.	Methamidophos (Tamaron 40 EC)	,,	33.98	20
3.	Phosphamidon (Dimecron 100 EC)	,,	30.91	17
4.	Monocrotophos (Nuvacron 40 EC)	,,	11.39	4
5.	Dimethoate (Rogor 30 EC)	,,	28.11	13
6.	Phenthoate (Phendal 50 EC)	,,	28.74	15
7.	Phosalone (Zolone 35 EC)	,,	40.77	21
8.	Carbaryl+Molasses (Sevimol 40)	,,	31.06	18
9.	Quinalphos (Ekalux 25 EC)	,,	11.80	5
10.	Fenitrothion (Accothion 50 EC)	,,	33.62	19
11.	Malathion (Cythion 50 EC	,,	47.59	23
12.	Fenvalerate (Sumicidin 20 EC)	0.05	7 48	1
13.	Methamidophos (Tamaron 40 EC)	,,	16.16	7
14.	Phosphamidon (Dimecron 100 EC)	,,	21.10	11
15.	Monocrotophos (Nuvacron 40 EC)	,,	8.64	3
16.	Dimethoate (Rogor 30 EC)	,,	14.53	6
17.	Phenthoate (Phendal 50 EC)	,,	19.41	9
18.	Phosalone (Zolone 35 EC)	,,	28.75	14
19.	Carbaryl *Molasses (Sevimol 40)	,,	29.62	16
20.	Quinalphos (Ekalux) 25 EC)	,,	8.11	2
21.	Fenitrothion (Accothion 50 EC)	,,	25.86	12
22.	Malathion (Cythion 50 EC)	,,	45.33	22
23.	Chlorpyriphos (Dursban 20 EC)	,,	20.23	10
24.	Control (unspray)	,,	66.12	

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Trade Exports

Trade with Pakistan

Govt. of Pakistan has announced a list of items for private sector imports from india through Trade Corporation of Pakistan (TCP), spices excluding chillies, Turmeric and cumin seeds have been included on the list.

Procedure for private sector import from India through TCP. Import Operations:

All the registered importers who intend to import any of the specified items from India will be required to submit an application accompanied by the Cus. tom Purposes Copy of the Import Licence, duly endorsed in favour to TCP, requesting to arrange its import on their behlf.

Applications will be made separately for each item and shall be entertained both in TCP's office at Karachi, and its Regional office at Lahore.

The goods from India will be imported by TCP in accordance with the relevant Government Rules and Regulations and those issued by the State Bank of Pakistan from time to time.

Booking Orders:

TCP will act only as an offical agency to arrange import of goods from India on behalf of the private importer who shall himself negotiate prices of goods, quality thereof and determine shipment schedules with the chosen supplier/exporter of the item concerned in India.

TCP will book order from any of the specified items only after an importer has furnished a proforma in duplicate from the concerned Indian supplier/exporter/manufacturer or a firm import contract concluded by him with the Indian supplier/exporter/manfacturer.

The proforma invoice/firm contract shall indicate description of contracted goods, quality, weight, unit price, total C&F value, shipmnet schedule and other terms of supply if any. The unit price and total C&F value shall be either in pak Rupees or in India Rupees as stipulated under Asian clearing Union Agreement.

Simultaneously, the importer shall ensure that two copies of the proforma invoice/firm contract are sent by registered post, directly to TCP by the Indian exporters.

No sooner an order is booked then TCP will intimate indicative ex–ship–hold price to the Pakistani importer for arranging inland letter of credit in favour of TCP on its prescribed proforma for the total value of goods to be imported.

TCP shall not entertain any claim either for quality, quantity, packing of the goods or delayed/non–shipment of goods or for any other loss that the importer may have sustained in the process of transaction/shipment except to the extent as provided in Clause 2.7.

TCP will open the foreign L/C only after the importer has furnished an undertaking in the prescribed form, idemnifying TCP against any claim whatso ever.

TCP shall lodge claim for quality or quantity of the goods on payment of nominal fees on concerned agencies viz suppliers/carriers underwriters, as the case may be, on receipt of a written request from the importer concerned within 30 days of landing of the goods at Karachi Port provided such a request is duly supported by all relevant documents to the satisfaction of TCP. TCP's liability in such a case shall be confined to the extent of the amount actually realized in settlement of such claims.

Inland Letter of Credit:

The Inland letter of credit to be opened by the Pakistani importer in favour to TCP shall cover 100% ex–ship–hold value of the goods, including insurance at the NTC rate and TCP's commission. TCP's commission will be charged at the rate of 1 to 2½% depending upon the nature of goods, subject to a minimum of Rs. 2,000/-. The L/C which is not in conformity with TCP's prescribed proforma shall not be acceptable.

In the event of importer's failure to clear the goods in time or non-shipment of goods by the Indian supplier/exporter, TCP will recover all its expenses from the inland letter of credit.

The inland letter of credit shall be negotiable by TCP on the basis of tentative ex-ship-hold, value of the goods on presentation of draft, TCP's Invoice, or TCP's bill in lieu of invoice in case of non-shipment of goods by exporters.

In the case the indicative ex-ship-hold price needs an upward revision due to any reason and the amount of inland L/C fails short TCP will be entitled to withhold the documents or realise its dues in any manner considered appropriate by it. If, however, the amount realised by the TCP aginst inland L/C is In excess of the actual ex-ship-hold value the consignment and other relevant charges, the same will be refunded.

Opening of Foreign L/C BY TCP:

TCP will open a confirmed, irrevocable letter of credit in favour of Indian exporter for the full value of the contracted goods but within the amount of the Licence through its own Bank under A.C.H. arrangements and in accordance with the terms/conditions of the proforma invoice/import contract.

For the above purpose, the importer shall make available the Exchange Control purposes copy of the Import Licence to TCP without which the L/C shall not be established.

Supply/Delivery of Goods:

TCP will endorse in favour of the importer the relevant shipping documents required for clearance of the goods. In case shipping documents are not received through bankers before arrival of the goods, an indemnity bond in lieu of Bill of Landing or B/R and customs purposes/guarantee will be made available by TCP to the importer for arranging clearance of the goods, provided the importer gives an undertaking absolving TCP of all responsibilities/liabilities/damages/losses etc; in case the documents are received with discrepencies and accepted by TCP.

On arrival of goods, the importer shall be required to take ex-ship-hold delivery of the same and arrange its clearance from the port area under his own arrangements and his own cost after paying customs duty, Sales Tax, port charges, etc., absolving TCP of all the responsibilities and Liabilities regarding payment of all/any dues including demurrages, Government dues; cess, taxes, etc. payable on the relevant consignments:

In case the carrier does not reach the destination or reaches the destination late, TCP shall not be responsible for any losses/damages, suffered by the importer.

Preshipment Inspection:

If required, the importer shall himself arrange for pre-shipment inspection of goods in India at his own risk and cost.

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Industry Snippets

A Bio-Chip Nose

The electronic chip, a tiny silver of silicon containining hundreds of circuits which is already being used to help the blind "see" and the deaf to hear, is now to be used to give a sense of smell.

Scientists at Warwick University in Coventry (English Midlands) have built a primitive "electronic nose" that is capable of distinguishing reliably between different odours. The researchers are working on the principle that individual sensing cells in the human nose respond with relatively little discrimination to the molecules of a wide variety of odours. However, the collective response of millions of cells, each slightly different creates a distinctive pattern for every smell.

Warwick University's prototype electronic nose used detectors which respond to a wide range of molecules. The ratio of the signals from the different detectors is computed to identify a particular smell.

The Warwick researchers have subjected the nose-on-a-chip to 21 different smells ranging from single chemicals to complex mixtures such as rose, lilac, jasmin, clove and sage oil. It is thought capable, however, of sensing many more smells.

The next step is to produce a more sophisticated bio-chip nose that will incorporate 100 different smell sensors together with circuitry to process their responses.

Miracle Rice

Chinese agricultural scientists have achieved a rare feat by independently developing a new strain of rice that gives world-beating yields.

The new Chinese strain is capable of yielding 20 to 30 per cent more than the best high-yield variety used on Asian farms. It is already being introduced in the Middle East and South East Asia - and is the first Chinese crop breed to be transferred to the United States. Sown on Californian State farms, the Chinese strain yielded up to 180 per cent more rice than the paddy strain currently in use in the US.

But the strain has yet to prove itself under rain-fed conditions. It is mainly designed for irrigated fields, which limits its application in the Third World.

Energy Drive

Seychelles is engaged in a mammoth effort to cut its burdensome oil bill. Plans have been drawn up for a 20-year programme to develop new sources of energy. Scientists attached to the new Integrated Energy Project at Pointe Larue are pinning their hopes on a biomass gasifier which would produce between 50 and 100 kilowatts of electricity for the outer islands.

The gasifier, a modified eight-cylinder car engine attached to a generator and fueled from the gasogen reactor by wood fragments, coconut husks and coconut shells, has already been tested. These sources are abundant in the outer islands and would reduce the need to get expensive diesel fuel. The electricity would be used for lighting, cold storage and saw mills.

Desert Sponge

A revolutionary technique for the greening of the deserts has been successfully tested in Egypt. It consists of a polymer (molecule compound) that absorbs 30 times its weight in water. Plants draw their water from the tiny granules, called Agrosoke, which are mixed with sand or soil.

The trials, carried out at the agricultural research station in Ismailiya, showed that a cubic metre of soil mixed with 3 kg. of the granules, required 65 per cent less irrigation.
Plants grown in this mix were stronger and

healthier than those in similar soils under normal irrigation - so the technique may not only bring plant life to areas where none existed before, but will also assists plant growth. Agrosoke, brain-child of British scientist Allan Cooke, could also provide the answer to another arid land problem - the loss of water by evaporation and seepage.

Vaccine Spray

Measles is still a major threat to children in Africa, where deaths from the disease are 400 times higher than they are in the West. Vaccines are not in short supply, and the chief problem is the delay in vaccination because the injection method requires qualified personnel.

Vaccination by aerosol spray is a possible solution now being investigated by London University's Institute of Child Health. A small mask placed over nose and mouth of the patient is attached to a cylinder of vaccine. Spray is projected by a foot pump. The method also eliminates the danger of infection from non-sterile hypodermic needles.

Meanwhile a method has been found to avoid spoilt vaccine being used in error - a common occurrence in hot countries. A treated paper in the container changes colour with any chemical disintegration in the vaccine.

Ceramic Mechanics

An engine made of fine ceramics, eliminating the need for complex machining and metal shaping is being developed in Japan. Ceramic parts are also poor conductors of heat, which makes them particularly economical and suitable for hot climates. Tests on ceramic engines are going on in several countries, but the Japanezes firm Asahi has produced a prototype of 3,600cc engine which is said to have an efficiency level near that of the conventional internal combustion engine. The Asahi engine uses external combustion, which means it can run on virtually any kind of fuel. The ceramic engine is also so light, that it could well be the basis of a new generation of high speed aircraft. News of the prototype is already attracting interest from defence industries in the West.

Infrared Liquid Analyser

The Anarad (USA) Model 701 is an NDIR liquid analyser with solidstate detector and electronics, utilising narrow bandpass filters to select the optical wavelength of interest. It is based on dual beam system to compensate for the change in line voltage and source temperature. The dual filter/detector system allows compensation for window deposit and turbidity in sample. Typical applications include–detection of H_2O in ethylene dichloride, acetic acid, methanol, ethanol, heavy water, aromatics, hydrocarbon steam, diatomic gases, carbon tetrachloride, liquid ammonia, vegetable oils, benzene and toluene or single component alcohol vapour in terms of as low as 0-50 ppm or 0-1% depending on application.

Solar Cooled Van

NICK 'Mr. Fish' Farren, who helped start a mobile fish shop revolution in Britain last year, will soon be launching an export model equipped with an ice machine powered by the sun's energy. Mr. Farren, sole agent for Trader Trailers of Nottingham, is hoping to cash in one of the great constraints on fresh fish consumption in many developing countries - inadequate distribution.

According to Mr. Farren, mobile fish shops equipped with ice makers could give an enormous boost to fish consumption in such countries, most of which also experience long hours of sunshine. Scientific brain behind the development is Dr. Robert Buckley, a deputy school headmaster, who said that the solar powered refrigeration system consists essentially of a number of solar panels, the refrigeration unit itself (in this case an ice machine), and an electronic interface.

The solar panels will be mounted on the roof and side flaps of the firm's "Isolator" insulated trailer, which is claimed to be light and manoeuvrable enough to be easily towed by any reasonably sized saloon car. Although the system has yet to be tested in the refrigerated trailer application, there is "no reason at all" why it should not work, says Dr. Buckley, who claims that with present technology an output of 700 Watts can be obtained from the solar panels of the trailer roof.

OVERSEAS TRADE ENQUIRIES

Trade enquiries received at Hoteres & Foodex Fair, Tokyo

1. Mr. A.B. Mehta,
M/s. Anand Canning Industries,
2-9-2, Minami Amma,
Minato-ku,
TOKYO. Instant Cardamom Extract

2. Mr. Hironori Nakamura,
Tokyo-kan Hotel,
Shishido,
Matsubra, Ito-shi,
TOKYO. Cardamom

3. Mr. Masaru Hayasaka,
Hotel Century Hyatt,
2-7-2, Nishishinjuku,
Shinjuku,
TOKYO. Cardamom

4. Mr. Masao Okada,
Planning Editorial Center Ltd.,
4-3, Miya Building,
Kojimachi, Chiyoda,
TOKYO- 102. Cardamom, pepper.

5. Mr. Yukio Sakamato,
Sanyo Foods,
Munma, Maebashishi,
Bunkyo Cho,
TOKYO. Pepper

6. Mr. Fusayo Goto,
1-1-1, Kashiwa,
Kashiwa-shi, Chiba,
TOKYO. Cardamom

7. Mr. Takuzi Masuda,
Masudaya,
1-24-8, Motoeokoyama-cho,
Hachiojishi,
TOKYO. Cardamom

8. Mr. Mistuyo Sekoguchi,
Oska Jikyokan,
1-3-17, Tenkachaya Nishinariku,
Osaka,
JAPAN. Cardamom

9. Mr. Y. Kitazawa,
Gaban Corporation,
Miyasaka Bldg., No. 7-2,
Nihonbashi-Honcho,
3-Chome, Chuo-ku,
TOKYO. Bleached cardamom, All Grades

10. Mr. Noboru Hizume,
Indian Cuisine Mukoro-chop,
Meguro Kaihatsu Building 4F,
2-16-1, Kami-Osaki,
Shinagawa,
JAPAN. Cardamom

11. Mr. Toshika Takahama,
Restaurant Chikumagawa,
3-29-17, Kamijujo, Kita-ku,
TOKYO. Cardamom, spices

12. Mr. Rhonda J Smith,
US Army,
USA Vet. Actv., Japan,
APO SF Cahf 96343,
TOKYO. Cardamom samples

13. Mr Kenny Deonarineshingh,
US Army Veterinary Actv.,
APO SF 96343,
TOKYO Cardamom

14. Mr. Masanobu Hattori,
Riken Kagaku Shoji Corporation,
4-13-9 Minami. Azabu,
Minato-ku,
TOKYO. Cardamom

15. Mr. Ehizuko Hirota,
Naturalist,
2-2-3-606 Tsuchipashi,
Miyamae-k, Kawasaki,
JAPAN. Cardamom
(Tel: 044-877-5733).

16. Mr. Isamu Igari,
John Swire & Sons (Japan), Ltd.,
Swire House,
14, Ichibancho, Chiyoda-ku,
TOKYO. Cardamom

17. Mr. Masaru Matsuda,
Marusin Maruokaya,
1-113, Tonya-Machi,
Kanazawa, Ishikawa,
JAPAN. Cardamom

18. Mr. Wendy Lewis,
Canadian Embassy,
A-3. Fuyo Compound,
13-19 Shiroganederi,
3-Chome, Minato-ku,
TOKYO-108. Cardamom

19. Mr. Tachio Yamashita.
Ustunomiya Fukudaya-
Department Store,
Utsu,
JAPAN. Spices

20. Mr. Edison David,
Rancho Dos,
Chiyoda-ku, Fujimi 1-12-1,
TOKYO-102. Cardamom

21. Mr. Tomiaki Kitahara,
Meijigyo Corporation,
1-21-3 Sakae-cho-,
Higashi, Murayama,
TOKYO. Green Cardamom,
Spices.

22. Mr. Tomoi Kawamura,
Maisho Cook Food Corporation,
Uyama, Tochigi,
JAPAN. Cardamom

23. Mr. Hisao Ikeda,
Yasuma Spice Co. Ltd.,
Saedo Midoriku Yokohama City,
JAPAN. Cardamom

24. Mr. Uasuko Sakao,
Tokyo University of Arts,
C/o. Yamada, 1-15-5 Senkawa-cho,
Toshima-ku,
TOKYO. Cardamom

25. Mrs. Seiko Hirota,
2-2-3, Saginumastar dwelling 606'
Jsuchikashi, Kamasaki-shi,
Miyamae-ku, Kanagawa-ku,
JAPAN. Cardamom
(Tel: 044-877-5733).

26. Mr. Haichi Isawa,
Katsuyama Kigyo Co. Ltd.,
36-3-5, Chome,
Sendai,
JAPAN-980. Cardamom

27. Mr. Toshiaki Ogawa,
Ikeda Tohka Industries Co. Ltd.,
2-28, Sakurababa-cho,
Fukuyama, Hiróshima,
720 JAPAN. Cardamom, spices

28. M/s. Teck Sang Pte. Ltd.,
11-Hongkong St.,
Singapore-0105. Marine and land
Products, spices
Cable : ADD IDEALFOOD
Telex : RS 25095 IDEAL.

29. Mr. Yukeo Abe,
Viva Co. Ltd.,
3-6-25 Minami Abe Shizuoka-city,
JAPAN. Cardamom

30. Mr. Masahiko Morituji,
Higashi Nippon Foods Co.,
2-2-15, Odori, Morioka,
Iwate, JAPAN. Cardamom small

31. Mr. Kaname Matsuda,
Tokai Boeki Co. Ltd.,
2-5, Nishi-shinbashi,
3-chome, Minatoku,
Tokyo, Japan. Cardamom

32. Mr. Masahito Ohara,
Imagawa Corporation,
2-Chyuo-machi,
Tsuchiura, Iparaki,
JAPAN. Cardamom Green

33. Mr. Hisaki Hayakawa,
Devy,
3-5-18, Tokota-chyo,
Takaoka,
JAPAN. Cardamom, spices

34. Mr. Makoto Noguchi,
Yokohama Tokyo Hotel,
Minami Saiwa,
Nishi-ku, Yokohama,
TOKYO. Cardamom, spices

35. Mr. Noritake Imai,
Salada Boy,
1-25-3, Ishikoiwa, Edogama,
TOKYO. Cardamom

36. Mr. Ritsuo Mizuguchi,
Pub Restaurant Green 4th,
4-23, Beniya-cho, Hiratsushi,
Kanagawo,
TOKYO. Cardamom

37. Mr. Toshio Nakano,
Hayakawa Co Ltd.,
2-14-12, Iwamoto-cho,
Chiyoda-ku,
TOKYO. Cardamom

38. Mr. Tomiko Veda,
2-7-2-602 Koyamadai,
Shinagama,
JAPAN. Cardamom

39. Mr. Yoshinobu Watabe,
Frandoll,
1-34-11, Minamimach,
Higashiyamatoshi,
TOKYO. Cardamom, spices

40. Mr. Yoshimitsu Sakai,
Co. Takara Hotel,
2-16-5, Higashiveno,
Dautoku, Cardamom and
TOKYO other spices

41. Mr. Setsuko Ando,
4-14-9, Hamadayama,
Suginami,
TOKYO Cardamom

42. Mr. Kunihiko,
Kunihiro,
2-2-21, Higashikumoya, Ota,
TOKYO.

43. Mr. Micko Nunomura,
California,
2-45-10, Kenji-Minami,
Suginami-ku,
TOKYO. Cardamom

44. Mr. Chieko Murata,
New Tendan,
4-31-17 Turumi Chyuo,
TOKYO. Cardamom

45. Mr. Hironori Kawasaki,
Tock Brush,
2-2-21 Shi bakoen, Minato,
TOKYO. Cardamom and
other spices

46. Mr. Isamu Fukuda,
Teikoku Seni Corp.,
2-5-13, Nihonbashi,
JAPAN. Spices

47. Mr. Shizuyo Yamashita,
Yamaharu,
2-27-14, Matsupara,
Setagaya,
TOKYO. Cardamom

48. Mr. Toshiteru Konishi,
Takamatsu Etrand Hotel,
1-5-10, Kotobukicho,
Takamatsu,
TOKYO. Cardamom, spices.

49. Mr. Yukiko Nakamura,
1-6-17, Hatagodai Shinagama-ku,
Tokyo,
JAPAN. Cardamom

50. Mr. Kenichi Suguka,
Kenko-Ham,
197 Yanashofa,
Hiratsuka-shi,
JAPAN.

51. Mr. Shiro Takarada,
Meiji Health Ham Corporation
Tachinochyo, Hirasuka,
JAPAN. Cardamom

52. Mr. Tsutomu Usui,
Kasumi Store,
1-3, Higashi,
Nakakancho,
Tsuchiurashi,
Ibaraki,
JAPAN. Cardamom

53. Mr. Kawashima Isamu,
Maebashi City,
Sumiyoshi Machi, 1-4-1,
TOKYO. Spices

54. Mr. Toshiji Baba,
Guriko Nutrition Foods Corpn.,
2-29-1, Kamiochiai,
Shinjuku 161,
TOKYO. Cardamom

55. Mr. Yuji Maeda,
Vejima Coffee Corporation,
1-8-3, Yaezu, Chyuo,
TOKYO-103. Cardamom

56. Mr. M. S. Nagata Naoko,
Tokyo-to,
Shibuya-ku,
Tomigaya-2-21-1,
TOKYO. Cardamom

57. Mr. Kazuo Yoshie,
Lion Corporation,
7-2-1, Hirai,
Edogawa,
TOKYO-132. Cardamom

58. Mr. Kazuko Kawamura,
Nikken Foods Co. Ltd.,
1-25, Oimatser-cho,
Sakai-shi, Osaka,
JAPAN. Cardamom

59. Mr. Yasuo Matsuda,
Taito Matsuda,
2-8-1, Yaezu, Chyuo,
TOKYO-104. Cardamom

60. Taj Mahal,
Restaurant,
Minami-1-jo,
Nishi 2-chome,
Sapporo, Cardamom,
JAPAN. other spices

61. Mr. Mamoru Tachikawa
Shinjuku Lion's Hotel,
2-22-1 Kabukichyo,
TOKYO. Cardamom

62. Mr. Mamoru Tachikawa,
Golden Mills Co. Ltd.,
3F-1, No. 580, Ming. Chuan E. Rd.,
Taipei, Taiwan,
Republic of China. Cardamom

63. Mr. Sigero Tanaka,
King Store,
Kanagaken-zishi shi-hisahge,
8-10-1, JAPAN. Cardamom

64. Mr. Kazuo Kasajirushi,
Century Corporation,
Tobu Department Store,
TOKYO. General Spices

OTHER TRADE ENQUIRY :

1. M/s. Manghnani Exports Pvt. Ltd.,
4, Dalamal Towers,
211 Nariman Point,
Bombay-400 001.
Phone : 222740/395441
Telex : 011-4711 PIYA IN

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THE SPICES EXPORT PROMOTION COUNCIL,
"World Trade Centre". Mahatma Gandhi Road,
ERNAKULAM SOUTH, COCHIN-682 016.

(It pays to grow and export all items of spices)

News Shorts

Seminar on Cardamom at Rajapalayam

A Seminar on Cardamom under the joint auspices of Cardamom Board, Union Carbide India Ltd., SPIC Ltd. and Rajapalayam Jaycees was held at Gandhi Kalai Mandram, Rajapalayam recently. Twentyone delegates from various Research Institutions, Pesticides and Fertiliser Industry and more than hundred cardamom planters attended the Seminar. Shri John M. John, Director, Cardamom Board inaugurated the Seminar while Shri T.A.N. Rathinam, Field Officer, Cardamom Board, Rajapalayam welcomed the gathering. Shri John M. John while speaking on the occasion explained the different development activities of the Board and informed the planters about the Cardamom Development Finance Scheme approved by the Planning Commission.

Briefing on the Seminar, Shri S. Syed Hanifa, President, Rajapalayam Jaycees said that the Seminar was organised mainly to equip the planter with the recent knowledge on management of cardamom pests and diseases, marketing and also to clear the proper doubts of the planters. The Seminar Chairman Dr. K.K. Krishnamoorthy, Dean, Agricultural College and Research Institute Madurai said India accounted for about 70 per cent of the world cardamom production and explained the different growth factors influencing cardamom plants and stressed the importance of the micro-nutrient application in the cardamom plantation. Shri P.R. Ramasubramanya Raja in his key-note address stressed the need to redress the planters' difficulties in maintaining the plantation. He appealed for a complete co-ordination between the State and Central Governments apart from the growers themselves to boost cardamom production.

A number of farmers who participated wanted incentives in the form of fertiliser and pesticides as was given for coffee, tea and rubber planters.

Dr. M.N. Alagianagalingam Associate Professor, Horticultural Research Station, Tamilnadu Agricultural University. Thadiyankudisai; Shri K R. Kurup, Agronomist, Indian Cardamom Research Institute, Myladumpara; Shri D. Kumaresan, Entomologist, ICRI, Myladumpara; Dr. S. Varadarajan, ICRI, Batlagundu; Dr. K.J. Madhusudhanan, ICRI, Myladumpara also spoke in the Seminar.

Shri V.N. Jairenga Raja, Secretary, Small Cardamom Planters' Association, Rajapalayam wanted better communication facilities and work taken up on the much talked about Garland scheme to reach cardamom areas. Shri K.P. Thilakar, Vice-President, Cardamom Planters' Association regretted that while Kerala Government had declared certain pockets as drought affected, the growers had been taxed.

Shri S.S. Rajalinga Raja, President, Tirunelveli District. Cardamom Planters' Association wanted cardamom growers to get themselves organised.

Shri Jayaraj, Agronomist, SPIC Ltd; Dr. M. Lakshmanan, professor and Head of the Department of Microbiology, Madurai Kamaraj University; Shri D. Krishnamoorthy, Union Carbide India Ltd., Shri Palaniappan, Assistant professor, Cardamom Planters' Association College, Bodinayakanur also presented their views in the Seminar

Dr K.K. Krishnamoorthy, in his concluding speech summerised the deliberations in the seminar and Shri K. Jothinathan, Union Carbide India Ltd. proposed vote of thanks.

Ecgc Cover for Africa

The Government of India has identified the Export Credit and Guarantee Corporation (ECGC) as a focal point to boost exports to Africa. At a recent meeting of the sub-group on strategy for exports to Africa, it was decided that the ECGC should expand and strengthen its coverage of exports directed to Africa. Additionally, a set of targets was formulated and the Corporation was asked to strive towards their realisation.

The high-powered group also allowed the ECGC to consider cases on a selective basis for credit to be given for a period of 365 days. However, such selective concessions would be considered only in cases of exports to Africa. Herein, about 16 countries in the African contihent have been identified by the group for such preferential treatment. Targets of exchange cover to be extended for export to these countries in 1983 and 1985 have also been given.

Some of the important countries which have been identified along with the value export deals targeted to be covered by the ECGC are as follows: Ethiopia Rs. 45 crores, Ghana Rs. 50 crores, Zambia Rs. 100 crores, Tanzania Rs. 75 crores, Mauritius Rs. 50 crores, Zimbabwe Rs. 50 crores, Nigeria Rs. 500 crores and Kenya Rs. 150 crores. Some of the other countries include Botswana, Cameroon, Seychelles, Uganda and Gambia.

"C B I News Bulletin" to Announce Visits to the Netherlands by Businessmen

The Centre for promotion of Imports from Developing Countries (C.B.I.), Netherlands,

REGISTRATION OF CARDAMOM ESTATES

It is a statutory obligation on the part of all cardamom growers especially, in Karnataka and Tamilanadu to get their estates registered under Section 11 (1) of the Cardamom Act 1965, and as per the Karnataka Cardamom Estate Owners' Registration Rules 1966 and Tamilandu Cardamom Estate Owners' Registration Rules 1966 with the Tahsildars Collectors of the concerned Taluk/Districts where the estate is situated.

It has come to the notice of the Cardamom Board that a large number of cardamom estates are yet to be registered in Karnataka and Tamilnadu. On the recommendations of the Cardamom Board the Government of Karnataka and Tamilnadu have extended the time limit for registration of cardamom estates upto 31-12-1983 In this context all unregistered cardamom estate owners in Karnataka and Tamilnadu are advised to apply for registration of their estate immediately.

Why you have to Register your Cardamom Estates

1. As per the Cardamom (Licensing & Marketing) Rules 1977 the cardamom auctioneers shall not negotiate sales of cardamom with an estate owner who has not registered his estate and the cardamom dealers shall not purchase cardamom from an estate owner who has not registered his estate. Hence unregistered cardamom estate owners are advised to apply for registration of their estates without delay for enabling them to sell their produce through auction or directly to dealer without any problem. Transaction of business in cardamom with unregistered cardamom estate owners is violation of Rules and is punishable under the Cardamom Act and Rules. Over and above, only registered cardamom estate owners are eligible to apply for assistances offered by the Cardamom Board.

2. It must also be noted here that no further extension of time limit will be allowed by the Government of Karnataka Tamilnadu to unregistered cardamom estate owners beyond 31-12-1983.

How to Apply for Registration

If you are an unregistered cardamom grower you are advised to file the prescribed application (copies are available in all the Field Offices of the Cardamom Board) in triplicate to the Tahsildars of the Taluk (in Karnataka) and Collectors of the District (in Tamilnadu) where your estate is situated. A treasury chalan receipt for Re. 1/- remitted under the Head of Account– No.L II Misc C.Other fees–fines and forefeitures (ii) Other items—is to be enclosed with the application by Karnataka unregistered cardamom growers, while those belonging to Tamilnadu have to submit the application along with a treasury chalan receipt for Rs. 5/- remitted under the Head of Account No. 068A-DP Code No. AFAA–0409.

Temporary Certificate as a Proof of Having Applied for Registration

The Cardamom Board has requested all Tahsildars/Collectors to issue a temporary certificate as soon as the application is filed. This temporary certificate will be taken as an acknowledgement for having applied for registration and this certificate can be produced wherever the registration certificate is required until the Cardamom Registration Certificate is issued to you by the Tahsildars/Collectors in Karnataka and Tamilnadu respectively.

Cardamom Board is at Your Services

The Cardamom Board will render all necessary assistance such as free distribution of required application forms, filling up of forms etc. as a measure to help the planters. You can contact any of the Board's Office located in cardamom plantation area to avail of this service. Board's Officers will help you.

has offered to publish in in their monthly News Bulletin information about the visits of businessmen reaching the Netherlands so that interested Dutch parties could arrange meetings with them. Indian Businessmen desirous of availing of the above facilities may write to CBI, P.O. Box No.30009, 3001 DA Rotterdam, the Netherlands; Phone: (010) 130787, Telex: 27151, with details of the exact date (s) free for meeting prospective customers during visit and about the samples they would be taking with them. The information should reach CBI at least six weeks prior to the visit.

TFAI Seeks Membership of the Union of International Bureau of Fairs, Paris

The Trade Fair Authority of India, New Delhi is trying for the membership of the Union of International Bureau of Fairs, Paris. The move will benefit TFAI in many advantages. Firstly, it will internationalise all the commodity fairs which at the moment are purely Indian. Secondly, it will provide TFAI international publicity free of cost as the Union regularly sends circulars to all its 18 member countries highlighting all fairs.

EXIM Bank Loan to Export Units Likely

The EXIM Bank is considering a proposal to extend credit to 100 per cent export oriented units as announced by the Executive Director of the Bank at the meeting with the Bharat Chamber of Commerce, Calcutta. The Bank's capital base is being planned to be raised from the current level of Rs. 75 crores to Rs. 200 crores during the next two years.

India's Share in World Exports

India's share in the total world exports for 1980 works out to 0.44 per cent and for 1981 to 0.39 per cent, according to an IMF issue of 'International Financial Statistics.

T D A Office at Stockholm

The Trade Development Authority of India will open an office at Stockholm, Sweden. An agreement to this effect was signed recently between Mr. D. W. Telang, Executive Director, TDA and Mr. Arne Georgzen, Area Manager, Import Promotion Office for Developing countries (IMPOD). A part of the expenditure on the TDA office will be met through financial assistance provided by IMPOD, Stockholm.

The decision to open the Stockholm Office comes in the wake of completion of a major export promotion project in Sweden undertaken by the TDAI.

PHOTO FEATURE

The Board Members at the 43rd meeting of the Cardamom Board held at Bangalore. From left are Mr Vijayaraghavan, M. P; Mr. K. Mohanachandran IAS, Chairman; Mr. K. S. Skaria Jr., Vice-Chairman; Mrs. Aruna Makkan, Director, Ministry of Finance; Mr. B. M. S. Negi, Under Secretary, Ministry of Commerce; Mr. K.G Nayar, Secretary, Cardamom Board.

Board Members at the meeting (from left) are Mr. Sheikh Abdul Kader, Member, Cardamom Board; Mrs Monika Das, M.P., Mr. Xavier Arakkal, M. P.; Mr. Vijayaraghavan, M. P.; Mr. K. Mohanachandran IAS, Chairman Mr. K. S. Skaria Jr., Vice - Chairman; Mrs. Aruna Makkan, Director(Finance) Ministry of Commerce; Mr B. M. S. Negi, Under Secretary, Ministry of Commerce; Mr. K.G. Nayar, Secretary.

The members and special invitees at the Board Meeting.

Another view of the Board Members and special invitees at the Cardamom Board Meeting.

Mr. K. R. Kurup, Agronomist, ICRI, Myladumpara speaking about cardamom cultivation and soil management during the Seminar on Cardamom held at Rajapalayam recently.

A view of the audience and Exhibition Pavilions during the seminar at Rajapalayam.

Statistical Abstract - April 1983

Production

The latest assessment of field position indicates that the production for 1982-83 season would be 2900 M. T. with State-wise break-up.

Kerala	:	1900 M. T.
Karnataka	:	800 M. T.
Tamilnadu	:	200 M. T.
TOTAL	:	2900 M. T.

Auction Sales & Prices

The State-wise auction sales and prices of cardamom during the current year and previous year are given below:

State	April '83		April '82		August-April '83		August-April '82	
	Qty (M.T)	Av. price (Rs/kg)	Qty (M.T)	Av. price (Rs kg)	Qty (M T)	Av. price (Rs/kg)	Qty (M.T)	Av. price (Rs/kg)
Kerala	...	...	2	125.21	1207	158.30	2186	121.36
Tamilnadu	4	179.58	9	94.20	69	153.05	109	94.17
Karnataka	49	196.38	26	133.77	691	160.02	774	103.21
Total	53	195.00	37	123.51	1967	158.72	3069	115.82

It may be seen from the above table that auction sales during April 1983 was much better than that during April 1982 and the average price during April 1983 has increased by Rs. 72/– per kg. compared to April 1982. The cumulative auction sales during August-April 1983 was less by 1102 M. T. when compared to August-April 1982. The average price during the current season has gone up by Rs. 43/-per kg. when compared to last season. The decrease in sales is mainly due to the fall in production and the consequent poor arrivals in the main auction centres of Kerala, Tamilnadu and Karnataka.

Export

Export of cardamom during the beginning month April 1983 of 1983-84 season was 113 M. T. valued Rs. 202.77 lakhs as against 27 M.T valued Rs. 33.47 lakhs during April 1982. The unit export price during April 1983 was Rs. 180/- per kg. as against Rs. 120/- per kg. during April 1982. It may be seen that export both in terms of quantity and value has increased considerably during April 1983 compared to April 1982.

Internal Market Prices :

Small Cardamom (Elettaria Cardamom)

BOMBAY

Variety	Price (Rs./kg)
AGEB	235-265
AGB	215-245
AGS	200-235
AGS-1	180-225
AGS-2	180-220

MANGALORE

Variety	Prices (Rs./kg.)
CGEB	205-220
CGB	200-215
CG-1	195-210
CG-2	185-205
CG-3	175-200
CG-4	150-170
BW-1	220-226
BW-2	195-196
BL-1	225-231
BL-2	200-220
CS-1	195-200
CS-3	110-120

Ammomum Cardamom

The average prices of Ammomum Cardamom prevailed during April 1983 for various grades are given below:

Bada Dana (Kanchi Cut) : Rs. 21.83 per kg.
Bada Dana (With tail) : Rs. 20.63 per kg.
Chotta Dana : Rs. 19.64 per kg.
Bhutan Variety : Rs. 20.72 per kg.
Nepal Variety : Rs. 20.26 per kg.

AUCTION SALES AND PRICES OF CARDAMOM

Centre	April '83			April '82			August—April 1983			April—March 1982		
		Prices (Rs/kg)			Prices (Rs/kg)			prices (Rs/kg)			Prices (Rs/kg)	
	Qty. Sold (kgs)	Max:	Average	Qty. Sold (kgs)	Max:	Average	Qty. Sold (kgs)	Max:	Average	Qty. Sold (kgs)	Max	Average
KERALA												
Vandanmettu	—	—	—	—	—	—	812259	401.00	161.91	1288684	243.40	124.18
Santhanpara	—	—	-	—	—	—	241126	222.00	147.73	417413	172.30	109.33
Udumbanchola	—	—	—	—	—	—	—	—	—	1273	127.60	113.97
Kumily	—	—	—	—	—	—	133227	370.50	156.22	19273	161.10	127.03
Kallar	—	—	—	—	—	—	3618	159.00	139.13	—	—	—
Cochin	—	—	—	2468	200.00	125.21	17381	250.00	155.87	18361	200.00	112.41
Kajanapara	—	—	—	—	—	—	—	—	—	20860	148.90	110.70
Total (Kerala)	—	—	—	2468	200.00	125.21	1207611	401.00	158.30	2186265	243.40	121.36
TAMILNADU												
Pattiveeranpatty	4406	259.90	179.58	4940	180.10	122.71	64514	259.90	154.89	67882	180.10	105.65
Bodinayakanur	—	—	—	4148	138.00	60.24	4264	178.00	125.20	40909	138.00	75.11
Total (Tamilnadu)	4406	250.90	179.58	9088	180.10	94.20	68778	259.90	153.05	108791	180.10	94.17
KARNATAKA												
Somwarpet	119	225.00	192.27	—	—	—	315	225.00	190.09	478	95.00	83.24
Mercara	7126	240.00	212.29	500	145.50	121.81	66441	240.50	162.54	83566	172.50	108.93
Mangalore	11099	231.00	202.74	1304	155.00	133.81	53876	231.00	173.23	101696	160.00	106.09
Saklespur	30463	238.50	190.49	22284	200.00	133.49	538003	250.50	159.28	559894	244.00	102.11
Sirsi	189	230.99	180.87	1239	152.00	143.19	23198	230.99	145.66	23220	176.99	98.29
Siddapur	76	225.61	181.50	243	146.00	135.35	9194	225.61	142.69	5367	151.85	96.71
Total (Karnataka)	49072	240.00	196.38	25570	200.00	133.77	691027	250.50	160.02	774221	244.00	103.21
Grand Total (India)	53478	259.90	195.00	37126	200.00	123.51	1967416	259.90	158.72	3069277	244.00	115.82

Source: Reports received from licenced cardamom auctioneers.

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JAL-1-83

Continued from page 7

culture, silviculture and pasturage.

Of course, there is perceptible loss of crops in the immediate vicinity of trees. But it is made good by a manifold increase in the yield in fields away from the trees. What is more, the trees reduce air temperature, lower the evaporation rate, increase humidity and modify the micro-climate favourably for the crop production.

Choice of Trees

Selecting the trees for farm forestry is an important task. The tree species should be of such nature that they can meet the day to day requirements of the rural people. The following are some of the best tree species suitable for different purposes.

For Commercial Purposes

The suitable tree species for this purpose may be, shisham (Dalbergia sissoo) kikar (Acalia spp) shehtoot (Morus spp.) and siris (Albizzia lebbeck).

Industrial Requirements

Shehtoot, shisham, mango (Mangifera indica), harar (Terminalia chebula), bamboos (Dendro calamus strictus), semal (Bombax ceiba), safeda (Eucalyptus spp.) and poplar (Populus spp).

For Fuel-Wood

The most suitable species are shisham, kikar dhak (Butea monosperma), safeda)Eucalyptus spp.), robinia (Robinia pseudacacia), jand (Prosopis juliflora) and siris.

For Soil Conservation

Safeda, shisham, Ipomea sp. (a shrub), Dedoenea viscosa (a shrub), robini and leucaena (Leucaena leucocephala).

For Fodder

Agricultural crops afford green fodder for short periods only. You can compensate this with fodder from trees. The species which are suitable for fodder are, shehtoot suhajana (moringa oleifera), siris, robinia- and leucaena.

Before planting the seedlings ensure that your trees are fast growing type and with narrow crowns. Their water requirement should be less. They should also be resistant to insectpests and diseases and should have some economic importance.

---

*Assistant Research Officer, Department of Forestry, H.P K.V.V., Palampur.

DEALERS & EXPORTERS TO SUBMIT MONTHLY RETURNS

Licensed cardamom dealers and exporters are hereby reminded to send their monthly returns (purchases, sales and exports) in the prescribed form on or before the 10th of every succeeding month regularly to the Board without delay. Non-submission of monthly returns in time is a violation of Cardamom (Licensing & Marketing) Rules, 1977 under which the licences are issued.

Licences will be renewed for the season 1983-84 only on receipt of the monthly returns.

CULTIVATION OPERATIONS

JULY	South-West Monsoon areas (Kerala-Tamilnadu)	North-East Monsoon area (Tamilnadu)	South-West Monsoon area (Karnataka)
Primary Nursery	Uprooting of seedlings for transplanting to secondary nursery beds.	Weeding. Repair and maintenance of beds, pandals etc. Watering if necessary.	Routine maintenance of the left-over seedlings.
Secondary Nursery	Uprooting seedling for transplanting to field. Transplanting to the newly formed secondary beds of seedlings uprooted from primary beds followed by mulching with dried leaves of grass.	Watering if required. Mulching. Routine up-keep Uprooting well-grown secondary seedlings for planting in field. if weather permits	Uprooting of seedlings for planting continued if weather permits.
Starting of New Plantations	Planting shade trees according to necessity continued. Planting seedlings up-rooted from secondary nursery staking them. Mulching the base of the plants. First round weeding.	Planting, mulching and staking continued depending on receipt of rains. Manuring of last years new planted areas	Planting of seedlings. Mulching and staking continued if weather permits. Maintenance of drains.
Maintenance of Plantations	Thrips control. Filling up of gaps caused due to removal of katte-affected plants or due to drought, falling of trees etc. Planting shade trees wherever necessary.	Gap filling. First round weeding, mulching, and earthing up continue. Thrips control.	Watch and ward. Drainge maintenance.

An Introduction to Export Prices of Cardamom

By Dr. C. A. Jos

Cardamom is one of the few crops the production of which leaves a large surplus for exports in all the producing countries. In India, about 62 per cent of the production is exported. It is an exacting crop to grow and is very sensitive to soil and climatic conditions. The wide fluctuations in production results in a high degree of instability of prices. Production of cardamom rose to 4500 tonnes in 1979-80 from 3900 tonnes in 1977-78 and it declined to 4100 tonnes in 1981-82. This phenomenon in the recent years is not quite strange; production of cardamom fell sharply from 4130 tonnes in 1963-64 to 2200 tonnes in 1964-65. Similarly, the cardamom production met with a sharp fall of 1115 tonnes in the year 1972-73 from that of its previous year. But the production in the year 1977-78 was higher by 1870 tonnes than that of the year 1976-77, registering an annual growth rate of 209.4 per cent. Cardamom production in India is thus characterised by wide fluctuations. Irregular supplies from the producing countries from time to time result in considerable fluctuations in prices depending upon spot availability of the commodity in question. This is further aggravated by manipulation of demands placed by foreign countries and by the speculative trading both in producing and importing countries. The table No.1. given below gives production, export and unit value of cardamom exported for the period, 1977-78 to 1981-82.

Table No:1

Production and Export of Cardamom from India

Year	Production (MT)	Export	Unit value (Rs./kg)
1977-78	3,900	2.763	175.28
1978-79	4,000	2,876	202.92
1979-80	4,500	2.636	184.23
1980-81	4,400	2,345	142.18
1981-82	4,100	2.319	130.00

Source: Cardamom Board.

It will be observed from the Table No. 1 that even if our production and exports were comparatively stable during the period in question, the unit value of cardamom exported moved within a range of Rs. 130.00 to Rs. 202.92 per kilogram. This observation confirms our earlier statement that even if the production uncertainities are removed, price uncertainty may cause fluctuations

It is interesting in this context to have a comparison between the weighted average price at auction centres and the average export prices (f. o. b.) both for the crop year (September-August) and the financial year (April-March) for the period 1970-71 to 1981-82.

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Table No.2

Auction prices vis-a-vis Export prices

Crop Year	Weighted average prices at auction (Rs./kg.)	Average Unit export prices (Crop Year) (Rs./kg.)	Average Unit export prices (Financial Year) (Rs./kg)
1970–71	50.77	57.4	65 78
1971–72	29.08	36.71	37.41
1972–73	49.70	58.46	49 45
1973–74	60 05	68.69	63.71
1974–75	76.24	86 08	81.92
1975–76	86.45	102.71	99.88
1976–77	156.75	183.57	157 17
1977–78	134.41	173.40	175.28
1978–79	166.42	205.00	202.92
1979–80	134 88	176.78	184.23
1980–81	98.91	152.03	148.18
1981–82	116.13	135.18	130.00

Source : Cardamom Board, Cardamom Statistics.

It is clear from this table that in all the years under review, the f.o.b. prices in crop years as well as financial years are definitely higher than the local prices. The only exception is found in the year 1972-73 when the f.o.b. prices in the financial year was slightly lower than the weighted average prices at auction centres. However, even there, the average f.o.b. price for the crop year was certainly higher than the weighted average price at auction centres. Not only the average f.o.b. prices (crop year) are higher than the average local prices, the margin between the two has been progressively increasing with the increase in the unit value of exports. The margin between these two prices were varying between an amount of less than Rs.10/- till the year 1974–75 and thereafter the margin has considerably increased, the maximum being an amount of Rs.41.9 in the year 1979–80.

There are two reasons for this tendency of increasing the margin between the weighted average prices at auction centres and Average Unit export prices (crop year) : (1) The increasing marketing costs vis-a vis labour charges, transport costs increased interest on capital and credit etc. and (2) at higher prices, the element of risk involved in export trade is higher and therefore the margin necessarily increases either when there is increase in production or in prices.

In a study of the prices within India and f. o. b. prices, the crop year is to be preferred to the financial year for the main reason that the established exporters do generally enter into contracts with the foreign importers of cardamom much before the arrivals of the produce into auction centres, though exceptions might be there. Depending upon the forecasts about the crop made by the exporters, they conclude sale contracts with their counter parts in the foreign countries. On the basis of these contracts, the exporters or their agents make their biddings at the auctions with the result that the auction prices are sufficiently influenced by the committments already made by them. This was testified by seven out of ten exporters of cardamom who were interviewed by this author. There are also instances where procurements are made first and then sales to foreign importers are made. But this procedure is limited to certain classes of exporters like the new entrants in the field of cardamom export trade or the casual exporters of cardamom. However, one can conclude that (1) the basic of international prices of cardamom is the crop forecasts made by the exporters and the level of carry over stock maintained by the foreign importers of cardamom and (2) the basis of auction prices in India is the immediate supplies made available by the cardamom growers and the committments made by the Indian exporters with their foreign counterparts.

An illustration

In October 1976, the weighted average prices of cardamom at the auction centres in India was Rs. 150.25 per kilogram when the unit value of exports of cardamom was Rs 121.79 per kilogram. With the increased arrivals of cardamom, instead of a decline in prices, in the month of November, the unit prices at the auction centres increased to Rs. 176 78 per kilogram where as the export prices increased to only Rs. 145.44 per kilogram in the same month. There were two reasons for an increase in prices at the auction centres than for exports. (1) The arrivals at the auction centres are the best fresh capsules with the 'green' colour and (2) the production for the year 1976-77 was expected to be less than the normal, by about 20 per cent. The auction prices in December declined to

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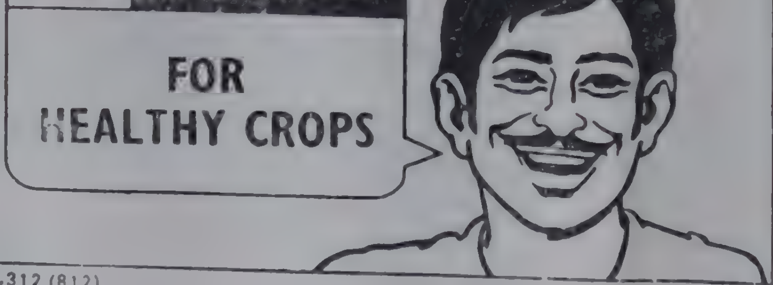

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Rs. 169.32 where as the export prices went up to Rs. 184.23 per kilogram. However, in the month of January 1977, both auction prices and export prices further increased to the level of Rs. 179.19 and Rs. 202.75 per kg. respectively. This illustration throws much light on the anatomy of the price structure, both at the auction centres and in export trade of cardamom.

An important conclusion from this analysis is that the Indian exporters are competent to make crop forecasts in their own way and they are instrumental in the price-setting process. The methods followed by the cardamom exporters may result in boosting up prices in the international market if the production is in short supply. Conversely, in years of better production they are responsible for bringing down the prices first in the international market and then in the local markets. It is no secret that our cardamom exporters make their earnings more from price fluctuations than from their services as exporters as such. All these lead us to one conclusion that the exporters having quoted a price for the supply of cardamom, based on their information and knowledge, they procure the required quantity at the auction centres, leaving a fair margin for themselves. This is quite possible so long as there is only limited competition among the cardamom exporters.

Of late, in the month of November 1982, the unit value realised by the exporters rose from Rs. 147.67 in October '82 to Rs. 223.51 where as the average price at auction centres increased from Rs. 143.00 only to Rs. 146.99 per kilogram during the same period. The only reason for the hike of Rs. 75.82 per kg. in the export price of cardamom is the anticipated fall in production resulting from excessive drought in the producing areas. At the same time in the local markets, the prices improved only by Rs.3.99 per kg. over the previous month. What is more important to note here is the less-than-proportionate increase in the prices in the local markets indicating that the exporters could make capital out of the short supplies prevailing in the international market. In contrast to this situation if the supplies are slightly in excess of the world demand the result is more-than-proportionate fall in the prices of cardamom at the auction centres showing that the exporters are capable of earning their share squarely. In 1971-72, when we had a situation of an excess supply in the world market, the foreign markets for the Indian Cardamom were more depressed than was warranted by the supply-demand conditions.

In a declining market the buyers are more reluctant to buy hoping that prices may further fall. The increased offerings by the exporters at lower and lower prices prevent the foreign importers to commit themselves in the off take of the commodity in question. The net result is step fall in local markets of the exporting country. This was what really happened in 1971-72 when the fall in F.o.b. prices amounted to 35.64 per cent over the previous year, and the fall in weighted average prices at auction centres accounted for 42.72 per cent for the same period.

In a rising market, both the growers and exporters are happy, each one getting his fair share. From the year 1978-79 prices were declining from Rs.202.92 to reach Rs.130.00 per kg. in 1981-82. However, prices improved and reached the all time high in November, 1982 with Rs.223.51 in per kg. The problem of seasonal variations in prices is always there. The short term fluctuations are still wide and violent. For instance, the difference between the maximum and the minimum prices in 1978-79 amounted to 25.04 per cent of the annual mean. But this percentage rose to 66.25 for the period April 1932 to February 1983 due to a higher degree of imbalance between supply and demand for cardamom in the world markets. ☐

EXPORT DIRECTORY OF DENMARK

The Trade Department of the Danish Ministry of Foreign Affairs along with the Ministry of Industry in collaboration with Kraks Legat has published a Directory entitled "Export Directory of Denmark-1982-'83" containing a comprehensive and detailed examination of Denmark's economy, its corporate sector and the Government Rules and Regulations governing the export trade.

The publication has also various sections entitled the list of goods, list of firms, trade marks register, know-how, Licences and turn-key projects and other sections of various economic sectors. This publication is available from Mr. Finn Milsted, NYTORV 17, DK-1450, Copenhagen K. Denmark.

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Trade & Exports

Exchange Arrangements and Trade Systems in the Netherlands

The currency of the Netherlands is the Netherlands Guilder. The authorized banks quote buying and selling rates for 14 foreign currencies. There are no taxes or subsidies on purchases or sales of foreign exchange.

Authorized banks are freely permitted to buy and sell convertible and inconvertible currencies both spot and forward, against convertible currencies, including vertible currencies, they are free to deal with residents and non-residents, whether banks or non-banks.

Exchange Control Territory:

Transactions with the Netherlands Antilles are subject to the same exchange controls as transactions with other countries. Vis-a-vis any third countries with which payment agreements might be in force, the Netherlands and the Netherlands Antilles will, if so stipulated, constitute the Netherlands Monetary Area.

Administration of Control :

Exchange control is administered by the Netherlands Bank on behalf of the Ministers of Foreign Affairs, Finance, Economic Affairs, and Agriculture, Import and Export licensing, transit trade, are handled by the Central Import Export Agency (CDIU) and the delegated offices, under directives from the Directorate General for Foreign Economic Relations.

Imports and Import Payments :

Imports from the Belgian Luxembourg Economic Union are free from import licenses. Import licences are required for imports originating in Hong Kong, Japan and state trading countries, and for the import of goods of unknown origin. In addition, import licenses are required for a limited number of products mainly in the agricultural, steel, and textile sectors, when not of EC origin. Except for imports of textiles originating in the Far East and in state trading countries, most imports that require an import licence are free from quantitative restriction. Most imports from Eastern European countries are formally liberalized.

Imports from non-EC countries of most products covered by the common Agricultural Policy of the EC are subject to import levies that have replaced all previous barriers to imports. Common EC regulations are also applied to imports from non-EC countries of most other agricultural and live-stock products.

Payments for imports may be made freely, provided that the method of payment conforms to the relative exchange control regulations. Residents may freely make advance payments for imports of commodities, but they require prior approval from the Netherlands Bank to delay payment for periods in excess of those that are customary in the trade concerned. □

Swiss Trade Promotion in favour of Developing Countries

The Swiss Office for the Development of Trade is an organisation in which industry and commerce collaborate closely with the Swiss authorities to strengthen and increase the country's foreign trade and to ensure a Swiss economic presence worldwide.

The Swiss Office for the Development of Trade's service "Trade promotion in favour of developing countries" was established with a view to assisting exporters from developing countries eligible for preferential treatment under the Generalised System of Preferences to promote the sales of their products in Switzerland.

The service "Trade promotion in favour of developing countries" is in no way a commercial undertaking. It is a service set up uniquely to provide information and to help establish contacts.

Information :

- Publication of the booklet "How to export to Switzerland" which gives basic information on the Swiss market and the way to approach it.
- Information on the possibilities and conditions governing the sale of specific products in Switzerland; Customs duties and import regulations; import statistics; market legislation; distribution channels; advertising; fairs.

Establishing of contacts:

- Distribution in Switzerland of a bulletin with offers from exporters in developing countries. (The relevant questionnaire is available on request).
- On request, organisation of contacts with potential buyers for exporters from developing countries visiting Switzerland.

For further information, contact;

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Import Promotion Offices Overseas

The United Nations International Trade Centre (I. T. C.)has released the revised list of Import Promotion Offices and similar organisations in a few countries.

The contact addresses of such national organisations are given below:

1. Mr. S. J. Clark,
Market Advisory and Preferences Section,
Trade Relations and Markets Division,
Department of Trade and Resources,
Edmund Barton Office,
Kings Avenue,
Canberra A. C. T. 2600,
AUSTRALIA.

2. Dr. E. Kopetzki,
Austrian Federal Economic Chamber,
Stubenring 12,
A–1010 Vienna,
AUSTRIA.

3. Mrs. V. Plas,
Director,
Office Belge du Commerce Exterieur,
162 BLVD, Emile Jacqmain,
B–1000–Brussels,
BELGIUM.

4. Mr. Kenneth G. Ramsay,
Director,
Trade Facilitation Office,
200, Promenade du Portage,
Hull, Quebec KIA OG4,
CANADA.

5. M/s. Foreign Relations Department
Chechoslovak Chamber of Commerce and Industry,
Argentinska 38,
17005 Prague7,
CHECHOSLOVAKIA.

6. Mr. Ivan Norgaard,
Import Consultant,
Import Promotion Office,
Danish Chamber of Commerce,
Boersen,
DK–1217 Copenhagen K,
DENMARK.

7. M/s. Prodec–import,
The Finnish Import Promotion Office for Products from Developing Countries,
Lapuankatu 4,
SF-00100 Helsinki 10,
FINLAND.

8. Mrs. Danielle Peres,
Head of Office,
Office for Foreign Exports,
Centre Francais du Commerce Exterieur,
10, Avenue d' Iena,
F-75783 PARIS Cedex 16,
FRANCE.

9. Mrs. Marianne Krause,
Director,
Chamber of Foreign Trade of the German Democratic Republic,
Schadowstrasse 1,
P. O. Box 12729,
DDR–1080 Berlin,
G. D. R.

10 Mr. G. Leonhardt,
Head of Department,
German Foreign Trade Information Office,
Blaubach 13,
P. O. Box 108007,
D–5000–Cologne–1,
F. R. G.

11. Dr. A. Szentfulopi,
Director,
Section for International Organisations,
Hungarian Chamber of Commerce,
Kossuth ter 6-8,
H-1389-Budapest,
HUNGARY.

12. Mr. Adin Talbar, Chairman,
Mr. Zvi Segal, Director,
Israel Centre for Trade with Developing Countries,
Chamber of Commerce,
84, Hachamonaim Street,
P. O. Box 20027,
1-00100-Rome-EUR,
ITALY.

13. The Japan External Trade Organisation (JETRO),
2-5, Toranomon, 2-Chome,
Minato-ku,
TOKYO-105,
JAPAN.

14. The Centre for the Promotion of Imports from Developing Countries (CBI)'
Coolsingel 58, 5th Floor,
P. O. Box 30009,
3001 DA Rotterdam
THE NETHERLANDS.

15 Mr. R. E. Graves,
Executive Officer,
Developing Countries Liaison Unit,
Department of Trade and Industry,
Private Bag,
Bowen State Building,
Bowen Street,
Wellington,
NEW ZEALAND.

16. Mr. Age Red,
Director,
Norwegian Import Promotion Office for Products from Developing countries,
(NORIMPOD),
P. O. Box 8147, Dep.,
N-Oslo-1,
NORWAY.

17. Mr. Stainslow Strus,
Director,
Foreign Relations Department II,
Polish Chamber of Foreign Trade,
ul. Trebacka 4,
P. O. Box 950,
PI-00950-Warsaw,
POLAND.

18. Mrs. Elena Paciagiu,
Head of Office,
Office of the Promotion of Foreign Trade Relations with Developing Countries,
Chamber of Commerce and Industry of the Romanian Socialist Republic,
22 Blvd. N. Balcescu,
R- Bucharest-1,
ROMANIA.

19. Mr. Per Borg,
Director,
Import Promotion Office for Products from Developing Countries (IMPOD),
Norrmalmstrog 1,
P. O. Box 7508,
S-10392, Stockholm,
SWEDEN.

20 Miss Martine Darbre.
Swiss Office for the Development of Trade,
Office Suisse d' Expansion Commerciale,
Avenue de 1' Avant-Poste 4,
CH-1001-Lausanne,
SWITZERLAND.

21. Mr. F. J. Glover,
United Kingdom Trade Agency for Developing Countries (UKTA),
London Chamber of Commerce & Industry Building,
69, Cannon Street,
London EC4N 5AB,
UNITED KINGDOM.

22. Mr. V. Petrov,
Chief,
Foreign Relations Department,
U. S. S. R. Chamber of Commerce & Industry,
6, Kuibysheva,
Moscow 103012,
U. S. S. R.

23. Mr Dragoslav S. Misic,
Secretary,
Co-ordinating Board for International Economic Relation,
Yugoslav Chamber of Economy,
Knez Mihajlova-10,
YU-11000-Belgrade,
YUGOSLAVIA.

News Shorts

Additional Charge For Cardamom Board Chairman

Shri K. Mohanachandran I. A. S., Chairman of the Cardamom Board has taken over charge as the Chairman and Managing Director of the Cardamom Trading Corporation, Bangalore in addition to his present charge as Chairman, Cardamom Board, Cochin. The corporation is temporarily located at No.107, II Main, II stage, West of Chord Road, Rajajinagar, Bangalore-560 086.
Phone: 353387

New President for the Essential Oils Association of India

The annual convention and general body meeting of the Essential Oils Association of India was held at Regional Research Laboratory (CSIR), Trivandrum recently. The convention was inaugurated by the Kerala Chief Minister Shri K. Karunakaran and presided over by Dr. Akhtar Hussain, Director, Central Institute of Medicinal and Aromatic Plants, Lucknow. A seminar on spice oils and oleoresins was also Conducted. Meanwhile, Dr. A. G. Mathew, the Director of the Regional Research Laboratory (CSIR), Trivandrum was unanimously elected as the President of the Essential Oils Association of India for the next term of two years. He is also the receipient of several awards including ICAR's Kidwai Prize, NRDC Invention Award, Indian Merchants' Chamber Award and Gardner's Award of the Association of Food Scientists and Technologists (India). Some of the processes recently developed under his dynamic leadership are fractionation of Chilli oleoresin into high pungency and colour fractions, dry packed green pepper and a dry process for making white pepper powder.

India-Libya Co-operation Pact

India and Libya have signed an agreement on economic and technical-Co-operation covering several aspects of industry and trade. The agreement is a sequel to the wide-ranging talks held by the visiting Libyan delegation led by the Secretary of the Socialist people's Libyan Arab Jamahiriyah, with the Indian Ministers and officials at New Delhi recently.

Passenger, Cargo Traffic up

The four international airports of the International Airports Authority of India witnessed a 15 per cent growth in passenger traffic and a 10 per cent growth in Cargo traffic during 1982. The four airports of Delhi, Bombay, Calcutta and Madras had handled in all 13 million international and domestic passengers, in addition to 1,58,400 tonnes of cargo during the year. Against this during 1981, these airports handled 11.7 million passengers and 1,43,000 tonnes of cargo.

New Forest Policy

The new forest policy recommended by the National Committee on Environmental Planning (NCEP) gives thrust on the generation of employment for rural and tribal population and rapid increase in forest cover including grass cover on denuded land unfit for permanent agriculture. Further, it has also called for a ban on export of wood-based forest products. According to official release, forest-based industries should be permitted only after rigorous scrutiny by a Central agency. It also underlined the need for reducing pressure on forest resources by promoting new uses of weeds and adopting improved logging technology to increase efficiency of extraction and minimise damage to the rest of forest stock. It is also observed that deforestation takes place at the rate of one million hectares a year, new plantations accounted for not more than 0.5 million hectares a year.

Thrips reduce your crop by 25%
lower your price by 25% or more

Rallis 'Super-Power' Products eradicate thrips

FURADAN - 3G

For thrips control without disturbing honey-bees without affecting pollination. Applied to the soil - if you please, along with fertilisers - FURADAN enters the plant system through roots and gives from within effective and complete protection from thrips, aphids, stem and capsule borers, white flies etc. Systemic FURADAN rapidly moves into growing parts and protects new shoots and panicles from thrips attack.

Soil application of FURADAN also gives protection from nematodes, root grubs and other soil insects.

Not washed away in the rain, no drift loss. Protection for longer period. Application takes less time. Quick coverage.

Dosage: 40 grams per clump (apply when there is moisture.)

ROGOR 30E

Dual action ROGOR - systemic and contact - enters the plant system within a few hours after spraying and gives protection from within. Contact action makes it very effective and versatile. Most economically priced. ROGOR for long range economical control of pests like thrips, aphids, stem and capsule borers and white flies.

Dosage 250 - 400ml per acre (2 ml in 1 litre of water)

PARATAF (50 EC and 2D)

And the traditional METHYL PARATHION - the powerful contact insecticide for quick knock-down in two formulations 50 EC for spraying and 2D for dusting. (Dusting during summer months)

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164, Linghichetty St. MADRAS - 600 001

Bristow Road, Willingdon Island, COCHIN - 682 003

Weights and Measures Rules Amended

The Government has amended certain provisions of the Standards of Weights and Measures (Packaging Commodities) Rules, 1977 towards providing effective protection to the consumer by plugging the loopholes in certain operative provisions relating to maximum price, etc. According to the amendment, the maximum price marked on the package would be inclusive or freight, but exclusive of local taxes which would include Sales Tax, Central Sales Tax, plus octroi where leviable, and actually paid by the retail dealer under any law in force in a particular area. It also provides for rationalisation of the quantities in which commodities are to be packed towards avoiding confusion to consumers as to the economic purchases. The amendments include provisions to ensure that the packaged commodities are sold to the consumers at or within the marked price.

Dithane M 45 For control of Diseases in Cardamom

Dithane M 45 has been found to be effective during the trial programme conducted by Indian Cardamom Research Institute, Myladumpara for the chemical control of the following diseases:

1. Azhukal
2. Leaf-blotch
3. Damping off in the primary nursery
4. Leaf-spot in the secondary nursery

The studies conducted against Azhukal disease revealed that the following fungicides are effective for the disease control:

1. Aliette 0.3%
2. Ridomil 0.25%
3. Bordeaux Mixture 1%
4. Dithane M 45 0.3%

The first two fungicides viz. Aliette and Ridomil are systemic with prolonged action but these are at present not available in India. In the nursery trials Dithane M 45 was found to be fairly good in controlling damping off and leaf-spot diseases. For the control of leaf-blotch disease 0.25% foliar spray with Dithane M 45 was found to be better than the other fungicides tried,

Some advantages of Dithane M 45 are the following:

1. It is compatible with a number of insecticides used for the control of cardamom thrips.
2. Compared with Bordeaux Mixture it is less expensive.

For spraying one acreof plantation with 1% Bordeaux Mixture we may require 4 kgs. of Copper Sulphate for which at the rate of Rs. 16/-per kg. the cost will come to Rs. 64/-. For spraying the area with Dithane M 45 at the rate of 1 kg. per acre the cost of the chemicals would be Rs. 58/-only.

Public Sector Profits up

There has been considerable improvement in the performance of public sector enterprises showing an increase to Rs. 29,264 crores during the first nine months of 1982–83 as against Rs. 24,069 crores during the same period in the previous year. Meanwhile the gross internal resources generated by the public sector enterprises was estimated at Rs. 2,133.73 crores compared with the budgeted generation of internal resources of Rs. 1,673 crores in the full year 1982-83.

Clarification on Import Against R E P Licences Issued

Ministry of Commerce, New Delhi has clarified that replenishment licences issued to actual users and registered exporters can be used to import items from rupee payment areas (R P A) as well as from general currency areas (GCA).

Licence-holders are generally guided by quality and price considerationn and in several cases imports are also effected from R P A. Public Sector Undertakings dealing with canalising items also buy goods from R P A.

The Ministry has clarified that no distinction is made between exports to R P A and that to G C A for R E P Licences purposes. The only exception to this provision is regarding exports of gold and jewellery items other than imitation

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- * Prompt deliveries.
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JAL-1-83

costume jewellery for which exports to R P A will qualify for R E P licences valid for import from R P A.

Control of Cardamom Thrips and Stemborer

The field experiments with the following insecticides conducted by Indian Cardamom Research Institute, Myladumpara have been found to be effective for the economic control of cardamom thrips and stemborer.

Insecticides recommended for thrips control:

1.	Quinalphos (Ekalux 25EC)	0.025%	– 100 ml/100 lit.
2.	Fenthion (Lebaycid 1000)	0.05%	– 62. 5ml/100 lit.
3.	Phosalone (Zolone 35EC)	0.07%	– 200 ml/100 lit.
4.	Monocrotophos (Nuvacron 40 EC)	0.03%	– 75 ml/100 lit.
5.	Methyl Parathion (Metacid 50 EC)	0.05%	– 100 ml/100 lit.
6.	Phenthoate (Phendal 50 EC)	0.05%	– 100 ml/100 lit.
7.	Dimethoate (Rogor 30 EC)	0.05%	– 167 ml/100 lit.
8.	Chlorphyriphos (Dursban 20 EC)	0.05%	– 250 ml/100 lit.

Insecticides recomended for stemborer control:

1.	Phosalone (Zolone 35 EC)	0.1%	– 286 ml/100 lit.
2.	Monophotophos (Nuvacron 40 EC)	0.1%	– 250 ml/100 lit
3.	Endosulfan (Thiodan 35 EC)	0.1%	– 286 ml/100 lit.
4.	Fenthion (Lebaycid 1000)	0.1%	– 125 ml/100 lit.
5.	Quinalphos (Ekalux 25 EC)	0.1%	– 400 ml/100 lit

The following dust formulations are also effective:

1. Folidol - 10 kg/acre
2 Ekalux – 10 kg/acre
3. Phendal – 10 kg/acre
4. Zolone – 10 kg/acre

Time of application suggested:

1. February		1. March
2. March		2. April
3. April		3. May
4. May	Or	4. August
5. August		5. September
6. September		6. October
7. October		7. November

October–November is the month to take up spray against stemborer. At this time, spraying against thrips need not be done.

Duty Free List for Passengers Enlarged

The Government of India has enlarged the list of articles which can be imported free-of-duty, by passengers returning from abroad for whom the duty free allowances has been raised from Rs. 1,000/ to Rs.1,250/- with immediate effect. According to a notification issued by the Finance Ministry, the articles which can now be imported free-of-duty (with limits) include air-conditioners, refrigerators, video and TV sets, cooking or washing machines, two-in-one sets, cassettes and sound recorders and cameras including movie projectors. Articles not exempted from duty would include motor cycles, scooters or mopeds, cigarettes exceeding 200 or cigars exceeding 50 or tobacco exceeding 250 gms and alcoholic liquor in excess of 0.95 litre.

STC to lay Emphasis on Exports

The State Trading Corporation of India is giving more emphasis on exports and the Corporation would try to make the ratio between exports and imports at 1:1.

According to the Chairman of STC, the market information collected by 18 branches of the STC from abroad would be disseminated to exporters in the country with a view to helping them to promote exports. He informed that in order to minimise delays in documentation, the STC's Office in Delhi had already been computerised and computers were likely to be introduced in other major branches on selective basis.

Bigger Role for IGA Urged

The Export Committee, set up by the Ministry of Commerce to go into all aspects of commercial arbitration in general and the working of the Indian Council of Arbitration (ICA) in particular, has stressed the desirability of developing the Council into a national body for servicing both domestic and foreign traders.

The Committee feels that various High Courts and Subordinate Courts might make increasing uses of the services of the ICA for settlement by arbitration in suitable cases filed and has suggested that the Ministry of Law may initiate suitable action in his regard.

It also feels that India's commercial representatives abroad may be directed to publicise the activities and functions of the I C A in the respective countries with a view to promoting the use of the ICA arbitration clauses in overseas contracts.

The Committee wants I C A to be the focal institution for undertaking both conciliation and arbitration work

Market Survey Reports From India Trade Centre at Brussels

The India Trade Centre in Brussels has already undertaken a number of market surveys and studies in EEC Countries to help Indian businessmen and exporters to better their marketing efforts. At the Centre a number of specialists and advisors are gathering market intelligence and passing it on to the trade promotion agencies in India The market surveys such as the ones on finished leather in France, electronic products in the Netherlands footwear and shirts in Belgium and tents, tarpaulins, campings goods and marine products in various EEC countries have already been completed by the Centre. Copies of the reports of following surveys/studies on products are available free-of cost to Indian Exporters on direct request to the India Trade Centre, Chaussee De Charleroi, 148, 1060 Brussels, Belgium.

Range of Packing Machines Offered

M/s. Wimco Ltd., Indian Mercantile Chambers, Ramjibhai Kamani Marg, Ballard Estate, Bombay-38 have reported that their Engineering Division is in a position to offer indigenously manufactured packaging Machinery covering Cartoning Machines. They are also offering special high speed coding equipment from M/s Dennison International U S A which are available ex-stock in Bombay.

To market a wide range of machines in India, M/s. Wimco Limited are agents for the following firms:–

1. DENNISON, U S A –Coding and Printing Machines for special applications.
2. STACKPOLS, CANADA–High Speed Labelling Machines
3. NEW-WAY, USA–Packaging M/c Systems etc.

Those interested may contact the firm direct for their requirements.

With the best compliments of:

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Industry Snippets

Roll-Off Tipper for Handling Garbage

A hydraulic equipment for pollution-free garbage handling, known as Roll–off Tipper, has been developed by Indian Hydraulic Industries (P) Ltd., based firm Delhi. The equipment comprises a truck chassis fitted with hydraulic lifting and tipping system and containers of over 10 cubib metre capacity.

With the Roll-off Tipper the cost of handling garbage is around Rs. 20 a tonne against Rs. 50 with a conventional tipper truck.

The equipment is already in use with the Ludhiana, Delhi and Ahmedabad municipal corporation.

Portable Towing Mechanism

The "Hook-er" is a portable rowing mechanism that is said to transform on ordinary pickup truck or car into a vehicle providing automobile towing services. The unit developed by Brown & Sites of U. S. can tow cars weighing up to 2,300 kg.

The "Hook-er" offers a special tracking system which enables it to track exactly with a towed vehicle, and it supports the complete weight of the disabled vehicle by itself with no weight transfer. It also backs up with a vehicle in tow, manoeuvering like a trailer.

Device to Check Cerebral Blood Vessels

Researchers at Jikei Medical College in Tokyo have developed and ultrasonic instrument, which is painless to patients, to be used io determine the conditions of the cerebal blood vessels in about 15 minutes.

The new instrument will greatly help discover the symptoms leading to cerebral palsy, the second deadliest disease in Japan after cancer and arteriosclerosis, hardening of the arteries.

Artificial Knee Joint

Staff at the National Centre for Tribology, part of the U. K Atomic Energy Authority have been working on the development of a new knee joint.

The first three versions were used only to make amputated limbs more mobile but the first six joints of the Mark 4 type have been fitted to living people and are reported to be a success.

Although there are many artificial knee joints on the market, the advantages of the Tribology Centre design include flexation through 165°, and ease of insertion by the surgeon.

Diesel Fuel From Plants

New steps in the departure from oil are at present being studied by the R & D division of Volkswagenwerk AG in Wolfsburg, West Germany The goal this time is the biotechnical production of diesel fuel instead of substitute for petrol.

The point of departure is species of plant which produces hydrocarbono; euqhorbia, or spurge, as it is popularly known. The species includes poinsettia, the popular "Yule star".

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Factamfos 16:20 gives the essential Nitrogen for crop growth in Ammonical form. It remains in the soil without loss. The plants can absorb it quickly.

The entire phosphorus in Factamfos 16:20 is water soluble and results in better yield.

FACT'S free expert agronomic advice and soil testing services are available to planters.

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FACT 780-R

Christ's thorn, therubbertree, cassava, and the castor oil plant. Certain types of this species contain no less than 10 per cent of their weight in hydrocarbons, which can be used as a raw-material for the production of a liquid resembling heavy oil.

The necessary stages in production are now being refined in Wolfsburg, where they are testing a high-pressure, direct hydrogenation process, which is to say enrichment with additional hydrogen atoms. Together with the Union of German Euphorbia Growers they are also attempting to increase the hydrocarbon content of the raw product.

Biotechnology

A continuous electrophoretic separator for isolating and purifying biochemical materials on an industrial scale has been developed.

A single machine can process 2.4 litres of material per hour allowing up to 29 separate fractions to be drawn off. The machine can be used in the commercial scale production of high value pharmaceuticals, the fractionation of blood cells and plasma, and in biotechnology research and development.

More from: Department of Industry's Minerals & Chemicals Requirements Board, Harwells, C/o The Financial Times Ltd., Bracken House, 10 Cannon Street, London EC4P 4BY, England.

Auto Alarm Receiver

A special purpose receiver the auto alarm receiver AR 4211, has been introduced.

This concept table top model receiver distress signals from the ships and gives an alarm automatically. Both visual and audio alarms are provided. Operators presence is not required. This can be kept an round the clock and hence no distress signal goes unnoticed. Microprocessor controlled detector circuits ensure reliable and error free detection.

Operating on 500 KHz, this receiver can detect distress signals sent in A1/MCW mode. This can also be used as an ordinary watch keeping receiver and can receive 500 KHz signals in al Az and 13 mode. The built-in loudspeaker can give upto 500 MW audio signal. The audio can be heard on a headset also. The receiver works on 230 volts AC mains. The audio alaım works with external battery. The alarm bell is triggered if the main supply fails.

New Burner

According to Mr. A. J. A. Tauro, Chairman, Indian Oil Corporation, a new gas burner developed at the Corporation's R & D Centre will save nearly 17 per cent cooking gas. The new burner has a light weight suitably angled burner top with improved design. The burner base allows unrestricted air to be sucked in permitting better air-fuel mixture and better efficiency.

Blood-Clotting Inhibitor

A Swedish pharmaceutical company has succeeded in preparing antithrombin, rhe most important natural inhibitor of blood clotting. Antithrombin, a protein that occurs in the blood in very low concentrations, is administered to persons with antithrombin deficiency in order obtain normal levels. Clinical trails are now in progress to investigate the usefulness of antithrombin in other areas of application than hereditary deficiency, including acquired antithrombin deficiency in, for example, diseases of the liver, severe infections and certain disease occuring during pregnancy.

Since antithrombin is an endogenous substance, the risk of side-effects is very low, according to the manufacturers, although jaundice cannot be entirely ruled out. To minimize the latter risk, plasma source material is collected in the Norbic countries, where the incidence of jaundice in blood donors is very low. Attempts are now being made to eliminate the risk of jaundice by means of heat treatment during the manufacturing process.

Statistical Abstract - May 1983

Production

On the basis of the latest assessment of field position the production for 1982–83 season is estimated as 2900 M. T. with its state-wise break up as indicated below:

Kerala	1900 M.T.
Karnataka	800 M.T.
Tamilnadu	200 M.T.
Total	2900 M.T.

Auction Sales and Prices

The state-wise auction sales and prices or Cardamom during the current year and previous year are as follows:

TABLE A

State	May '83 Qty (MT)	May '83 Ave. price (Rs/kg)	May '82 Qty (MT)	May '82 Ave. price (Rs/kg)	Aug-May '83 Qty (MT)	Aug-May '83 Ave. price (Rs/kg)	Aug-May '82 Qty (MT)	Aug-May '82 Ave. price (Rs/kg)
Kerala	—	—	—	—	1207	158.30	2186	120.76
Tamilnadu	1	220.48	5	108.02	70	154.12	114	94.78
Karnataka	26	245.03	20	135.63	717	163.07	797	104.02
Total	27	244.01	25	130.06	1994	159.87	3097	115.50

From the Table (A) it may be seen that the auction sales during May '83 has indicated an upward trend. The average price also has recorded a hike by Rs. 114/-per kg.. compared to May '82. Though the cumulative auction sales during August-May '83, was less by 1103 M. T when compared to August-May '82 ,the average price has gone up to the tune of Rs. 44/-per kg. The decrease in sales is mainly due to the fall in production and consequent poor arrivals in the main auction centres of all the three cardamom growing States.

Export

Month-wise provisional figures of cardamom exported during 1983-84 received from the Customs Authorities on the basis of shipping bills passed compared to previous year's export on the basis of shipments effected by the cardamom exporters are given far below:

It may be seen from the Table B.Table that during the first two months in 1983-84 the quantity has shown an increase of 9% and the earnings has increased by 34% compared to 1982-83 period. The unit export price has gone up by Rs 30/- per kg during the current year compared to last year.

Information available on country-wise export of cardamom indicates that 95% of export during the current year was to U. S. S. R. while in last year 92% of export was to Kuwait and Saudi Arabia.

INTERNAL MARKET PRICES

(a) Prices of Small Cardamom

The Internal Market Prices of small cardamom (Elettaria Cardamom) prevailed during May '83 for various grades are as follows:

Bombay

Grade	Prices (Rs/kg)
AGEB	235–270
AGB	200–240
AGS	200–235
AGS–1	180–235
AGS-2	180–210
Bleached Cardamom	180–220
Coorg Variety	180–240

Mangalore

Grade	Prices (Rs/kg)
CGEB	235–275
CGB	230–270
CG-1	225-265
CG-2	210–260
CG-3	200–240
CG-4	180–210
BW-1	225-296
BW-2	210-271
BL-1	230-296
BL-2	210-271
CS-1	200–245
CS-2	120–130

(b) Prices of Ammomum Cardamom

The average prices of Ammomum Cardamom prevailed during May '83 for various grades are given below:

Grade	Price (Rs/kg)
Bada Dana (Kanchicut)	24.43
Bada Dana (with tail)	23.31
Chota Dana	22.42
Bhutan variety	23.36
Nepal variety	22.64

TABLE B

Months	1983-84 Qty (Kgs)	1983-84 Value(Rs)	1983-84 U.Value(Rs/Kg)	1982-83 Qty(Kgs)	1982-83 Value(Rs)	1982-83 U.Value(Rs/Kgs)
April	112646	20277443	180.01	26800	3347404	120.41
May	13865	2574353	185.65	89860	13636396	151.75
Total	126511	22851796	180.63	116660	16983800	145.68

AUCTION SALES & PRICES OF CARDAMOM

Centre	May '83 Qty. Sold (kgs)	May '83 Prices (Rs/kg) Max:	May '83 Prices (Rs/kg) Average	May '82 Qty. Sold (kgs)	May '82 Prices (Rs/kg) Max:	May '82 Prices (Rs/kg) Average	August—May 1983 Qty. Sold (kgs)	August—May 1983 prices (Rs/kg) Max:	August—May 1983 prices (Rs/kg) Average	August—May 1982 Qty. Sold (kgs)	August—May 1982 Prices (Rs/kg) Max	August—May 1982 Prices (Rs/kg) Average
KERALA												
Vandanmettu	—	—	—	—	—	—	812259	401.00	161.91	1288684	243.40	123.09
Santhanpara	—	—		—	—	—	241126	222.00	147.73	417413	226.90	109.33
Udumbanchola	—	—	—	—	—	—	—	—	—	1273	127.60	113.97
Kumily	—	—	—	—	—	—	133227	370.50	156.22	439674	226.90	125.46
Kallar	—	—	—	—	—	—	3618	159.00	139.13	—	—	—
Cochin	—	—	—	—	—	—	17381	250.00	155.87	18361	200.00	112.41
Kajanapara	—	—	—	—	—	—	—	—	—	20861	148.90	113.81
TOTAL (KERALA)		Nil			Nil		1207611	401.00	158.30	2186266	243.40	120.76
TAMILNADU												
eranpatty	1111	252.30	220.48	3578	158.00	124.59	65625	259.90	156.00	71460	180.10	106.60
anur	—	—	—	1434	134.90	66.66	4264	178.00	125.20	42343	138.00	74.82
ADU)	1111	252.30	220.48	5012	158.00	108.02	69889	259.90	154.12	113803	180.10	94.78
KARN												
Somwarpet		—	—	—	—	—	315	225.00	190.09	478	95.00	83.24
Mercara		[illegible]	237.67	—		—	69146	300.00	165.48	83566	172.50	108.93
Mangalore			—	—	—	—	53876	231.00	173.23	101696	160.00	106.09
Saklaspur				19093	208.00	135.42	560704	300.00	162.79	581350	244.00	103.21
Sirsi				607	148.00	139.15	23387	260.00	146.43	23827	176.99	99.33
Siddapur				[illegible]	156.99	143.80	9307	275.99	143.92	5586	156.99	98.56
TOTAL (KARNATAKA)	25708	300.00	[illegible]			135.63	716735	300.00	163.07	796503	244.00	104.02
GRAND TOTAL	26819	300.00	[illegible]			[illegible]	1994235	401.00	159.87	3096571	243.40	115.50

Source : Reports received from the license

CULTIVATION OPERATIONS

AUGUST	South-West Monsoon areas (Kerala-Tamilnadu)	North-East Monsoon areas (Tamilnadu)	South-West Monsoon areas (Karnataka)
Primary Nursery	No work	Watering according to necessity. Routine upkeep. Mulching.	Clearing new site, digging, collecting and removing roots, stumps, stones etc. Preparation of beds, breaking cold, and spreading well decomposed farm yard manure or jungle soil. Broad cast Super phosphate evenly and stir slightly. Select disease free and high - yielding plants for seed collection.
—	Watering according to necessity depending on rains. Starting first round weeding towards end of the month.	Second round mulching. Plant protection measures. Watering. Clearing site for new secondary nursery. First digging and removal of stumps, stubbles etc.	Uprooting of seedlings for transplanting to field completed. Digging, clearing, preparing beds and transplanting seedlings left over in the primary nursery. Mulching with paddy husk. Routine watering. Erect shade pandals.
Starting New Plantations	ınd weeding conti- ıade trees accor- ssity continued.	Clearing of footpaths, road, drainage channels etc.	Planting seedlings, mulching and staking depending on weather condition, completed. Filling up gaps in previous year's planted areas. Planting shade trees where necessary.
Maintenance of Plantations	Seco. Thrips Starting ding. towards n. arvest	Thrips control. 1st round harvest towards month end.	Weeding. First round harvest, curing, storage etc.

Strategies of Cardamom Pest Management in Lower Pulneys of Tamil Nadu

S. VARADARASAN* AND DURAI KUMARESAN**

Cardamom (*Elettaria Cardamomi* Maton), an export oriented spice crop, is extensively grown in the hilly tracts of Kerala, Karnataka and Tamil Nadu. Of the three States, Tamil Nadu holds 10% of the total area, accounting for 7% of the total production. Lower Pulney hills in Madurai District, commonly known as Cardamom hills, are the main area of the plantation in Tamil Nadu. Cardamom flourishes well in the forest area of Lower Pulneys situated at an elevation of 1000 to 1400 meters M.S.L having an annual rainfall ranging from 1060 mm to 1850 mm. In recent years cardamom production, in terms of quantity and quality, has been declining per unit area. One of the important factors which directly attributes to the decline is the damage caused by insect pests. They not only cause direct crop loss but also lead to the destruction of plants over a long period

The only existing method of insect pest management is by insecticide. On discussing the schedule of plant protection with planters in Lower Pulney, the following categories of farmers could be identified

(1) The over-cautious planters resort to spraying certain chemicals at an interval of 30 days, the so called 'Insurance Spray', which is uneconomical owing to large amount of money spent on P. P. Chemicals and labour and consequently the returns will be very poor;

(2) Certain planters adopt plant protection at an irregular intervals which may not coincide with pest incidence and thereby the plant protection management becomes ineffective leading to loss in quality and quantity

(3) Few of them give one or two rounds of insecticide dusting per year during the summer months (May and June). Here due to insufficient plant protection measures, the returns will not be upto their expectation

(4) And certain planters do not resort to any of the plant protection measures either due to financial position or unawareness of it.

Generalizing the above, it is evident that farmers adopt insecticide application on a calender basis or after seeing a few insect pests or only after a considerable damage is caused by a particular pest. In all these instances, the farmers incur unnecessary expenditure in addition to the loss caused by untimely spray. It is quite obvious that unless a sizable population of a particular pest is observed in the field (i. e. economic injury level), it is a mere waste to spend money on plant protection. In India during the sixtees, the emphasis was on working out the schedule of control measures, for various crops on a routine basis (on a calender basis) whether the pest appeared or not. These were called the 'Insurance treatments''. Such recommendations have now become outdated. The adage ''Prevention is better than cure'' does not apply to economic plant protection, revealing that plant protection strategy should be in consonance with the population dynamics and bioecology of the concerned pests as well as the biology of the host plants.

Stressing the importance of the economics and the need based pest management, an attempt is made in this article to provide the available information on the key pests with reference to

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*Indian Cardamom Research Institute, Regional Research Station, Thadiyankudisai at at Batlagundu.

**Indian Cardamom Research Institute, Myladumpara.

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their biology, symptom of attack, their population dynamics and control measures. This is based on insect pest survey conducted in Lower Pulney during the year 1982.

As far as the Lower Pulney is concerned, the major pests affecting cardamom are thrips and stemborers. In recent times, brown scales and white flies attained major status, causing considerable damage in Pachalur and Adalur areas. The shoot fly occurence was also widely noticed. A study on the incidence and intensity of the pests of cardamom revealed a specific pattern of their occurrence and the strategies of management emphasised here for the major pests (i. e. thrips and stemborer) will also give a check on the other minor pests without giving separate treatments for them. In other words, application of insecticide against the two major pests will have an impact on other existing pests also.

The pest occurrence observed from January through December is as follows:

STEM BORER (*Dichocrocis punctiferalis* Guen). The adult is a medium sized brownish yellow coloured moth with a number of dark spots on the wings. Eggs are laid mostly on the top leaf axils of young pseudostem. The emerging larvae bore into the tender parts of the panicles, flower buds and immature capsules. Only the late stage larvae bore into the stem. The caterpillar is pale reddish brown in colour. Life cycle is completed within 25-40 days.

The caterpillars bore into the central core of the pseudostem resulting in the death of the central spindle and development of characterstics "Dead heart" symptom. In the case of capsules, the caterpillars bore into them and feed on the seeds rendering them empty. Extrusion of frass through the bore hold is the typical indication of the stem borer infestation.

Stem borer incidence forms two peaks of abundance that crosses the economic injury level.

First Peak: Early instars of the larvae of stemborer make their appearance from the second fortnight of January onwards. This coincides with the large scale initiation of panicles and the latter have become the target of attack of the larvae. Young shoots are also attacked.

Second Peak: Stemborer abundance was noticed from late September and early October onwards.

The pest can be effectively controlled by application of insecticides with two rounds. Viz. 1. January–February and 2. September–October (vide Table-1); in addition to this, removal of affected shoots having larvae and alternate host plants of pest like castor, turmeric and Ginger.

THRIPS (Sciothrips cardamomi (Ramk) Adult thrips are greyish brown in colour measuring 1.25–1.5 mm in length. The first and second stage larvae grow by feeding on the plant sap. Life cycle is completed within 25-30 days.

The injury caused by thrips affects the final yield i.e. capsule in two ways (Quantity&Quality).

(1) when the panicle is attacked it becomes stunted and the production of flowers is adversely affected. Thrips cause shedding of flowers and tender capsules by attacking the flower stalk, if the population is high during summer months.

(2) The quality of the capsule is affected when the attack is on the immature capsule. while feeding, this insect lacerates the surface tissues of the tender capsules causing injuries which develop as corny encrustations on pods. Such capsules appear stunted, malformed and shrivelled with gapping slit on the outer skin. The seeds from such capsule are poor in aroma.

Population starts increasing from late November onwards (or after the cessation of North East monsoon) and reaches its peak in late March onwards till the first heavy shower of South west monsoon starts. With the onset of monsoon shower the thrips population showed a gradual decline and reaches its minimum during August. The heavy rainfall and high humidity tend to be harmful to thrips where as higher temperature and low humidity favour the growth of insects.

From the foregoing it is evident that plant protection against thrips should be scheduled to give emphasis right from the panicle initiation till the capsule stage. The first and second round of spray to be given for stemborer in January–February and September-October (vide Table-1) will have a check on thrips population and hence their

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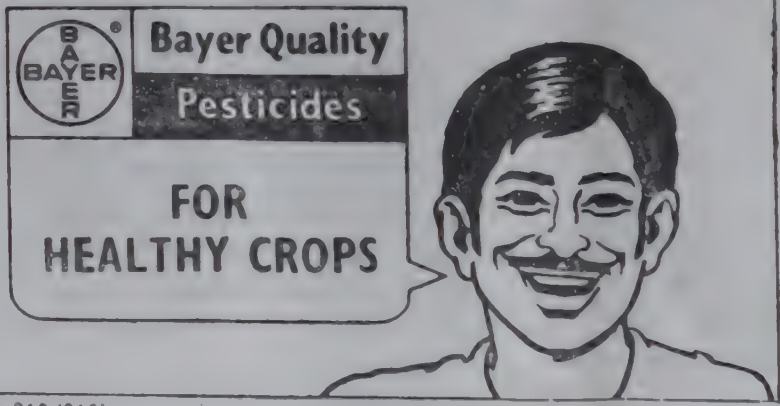

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- —APHIDS
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build up will be marred till April. Hence the schedule of spray for thrips starts from April through August at an interval of 30 days In between two scheduled sprays, this interval can be extended upto 50 days, if the particular area is experienced with heavy showers.

SHOOT FLY (*Formosina flavipes* Mall) Maggots and Pupae of this fly are seen inside tender shoot from March onwards. As a result of feeding by Maggots, the shoot decays. Infestation does not cause total obstruction of plant growth since side tillars are produced. Infestation is observed from January through May and June. For the control of this pest no separate treatment is necessary. The first round of spray given for stemborer will have some influence on the population of the shootfly (vide Table 1).

SOFT BROWN SCALES: (Saissetia coffeae Walk) This scale insect is found in the lower surface of leaves mostly confined along the mid rib. The infestation is easily identified by the growth of black sooty mould developed by the honey dew on the upper surface of the leaves next below the infested leaves. The crawlers generally appear during March-April and October-November. This pest is of minor importance but gain a major status in certain pockets of Lower Pulneys viz., Pachalur and Adalur. The symptom of attack will be yellowing of the affected leaves. No separate insecticide treatment is necessary for this pest. The first round of spray given for thrips(April) and the second round given for stemborer (September-October) will have a check on this insect population

It is a well known fact that the population of the pests varies from year to year influenced by biotic and abiotic factors. Therefore, indiscriminate use of insecticides in accordance with calender based schedule not only results in uneconomic expenditure but also creates many secondary problems like pesticide resistance, pest resurgence, disruption of the agroecosystem and environmental pollution. Hence, it is suggested to the planters to adopt need based application of insecticide for the control of insect pests on cardamom. A tentative insecticide schedule is worked out on the basis of the research findings for the benefit of the planters of Tamil Nadu (Table-1).

Cardamom Board has started one Regional Research Station at Thadiyankudisai in 1980 for the benefits of the planters of Tamil Nadu. Planters can call on the Research Station for any assistance regarding pest problem and cultivation details of cardamom, so that planters get maximum return from an unit area with minimum inputs.

TABLE 1

Time of application	Name of insect pest	Recommended insecticide	Dosage% of a.i.
1. **JANUARY-FEBRUARY:** (One round of spray)	1. Stemborer 2. Thrips 3. Shootfly 4. Brown Scales 5. Aphids	1. Monocrotophos (Nuvacron or Corophos) OR 2. Fenthion (Lebaycid)	0.1%
2. **APRIL TO AUGUST:** (one round at an interval of 30 days under dry condition. The interval can be prolonged to 40 to 50 days if there is heavy rainfall in between two months)	1. Thrips 2. Brown Scales 3. Aphids	1. Chlorpyriphos (Coroban) 2. Quinalphos (Ekalux) 3. Phosalone (Zolone) 4. Monocrotophos (Nuvacron)	0.04% 0.025% 0.07% 0.03%
3 **SEPTEMBER-OCTOBER** (One round of spray)	1. Stemborer 2. Brown scales 3. Whiteflies 4. Leaf caterpillar 5. Aphids	1. Fenthion (Lebaycid) 2. Methyl Parathion (Matacid) 3. Monocrotophos (Nuvacron or Corophos)	0.1% 0.1% 0.1%

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IMPORT & EXPORT POLICY FOR APRIL 1983 - MARCH 1984

The new import-export policy presented to the Parliament by the Commerce Minister, Shri V.P. Singh aims to further boost the exports and also achieve savings in the import bill. According to the Commerce Minister, the philosophy underlining the policy is "neither liberal nor restrictive". The new policy has to be perceived against the perspective of Government's goal of reaching an export target of Rs. 10,500 crores in 1983-84. The target conceived envisages a 15 per cent growth over the previous year. Other thrusts of the policy have been to provide for essential imports and to ensure the protection of indigenous industries. Thus some of the loopholes of the last year's policy have been sought to be plugged.

The import policy has been so drawn with a view to broadbase the production base for exports. Export promotion will remain an important objective of the policy. Other objectives are (i) to effect all possible savings in imports (ii) to provide support to the growth of indigenous industry (iii) to provide for optimum utilisation of the country's resource endowments, especially in manpower and agriculture (iv) to facilitate technology upgradation, with special emphasis on export promotion and energy conservation and (v) to further simplify and streamline procedures and to reduce points of control.

Relations of the Trading Houses and Export Houses have been sought to be strengthened. The policy contains additional facilities for exporters who are able to show a significant rise in their exports above a prescribed level. It also contains, for the first time, a new chapter relating to "Special Provisions" like the Chapter of Technology introduced as part of the policy statement last year. The chapter on special provisions contains details of the various special facilities and provisions introduced in the import policy.

In the policy, 38 items of raw materials and components have been excluded from OGL, shifting some of them from permissible to banned list. 27 items of capital goods have been taken out form OFL and 144 new items of industrial machinery have been included in it. While import of impregnating oil for cable industry, transformer oil (synthetic), heat transfer oil (synthetic) and textile finishing oils have been decanalized, eight new items have been added to the list of canalised items.

The policy is expected to achieve savings of about Rs.500/- crores in the import bill during 1983-84. Savings of Rs. 300 crores is sought to be achieved from withdrawal of the facilities given to trading and export houses for imports of OGL items without debit to the replenishment and additional import licences as well as by voluntary surrender by exporters of their REP licences. Further, savings of Rs. 76 crores is going to come through regulation of imports of components by units registered with DGTD and restrictions on imports of machinery spares for after sales service.

Measures to Provide Further Impetus to Exports :

The Open General Licence for approved 100% export oriented units has been substantially enlarged to include second-hand capital goods, diesel generating sets, consumables and packing materials. The facility of OGL imports for capital goods has been extended to other units producing exclusively for exports.

The existing schemes for import of raw materials and components without payment of customs duty, for export production will continue with further improvements. More items have been added to the Duty Exemption Scheme for manufacture of intermediate products. This scheme has also been extended to cover intermediate being supplied to 100% export oriented units.

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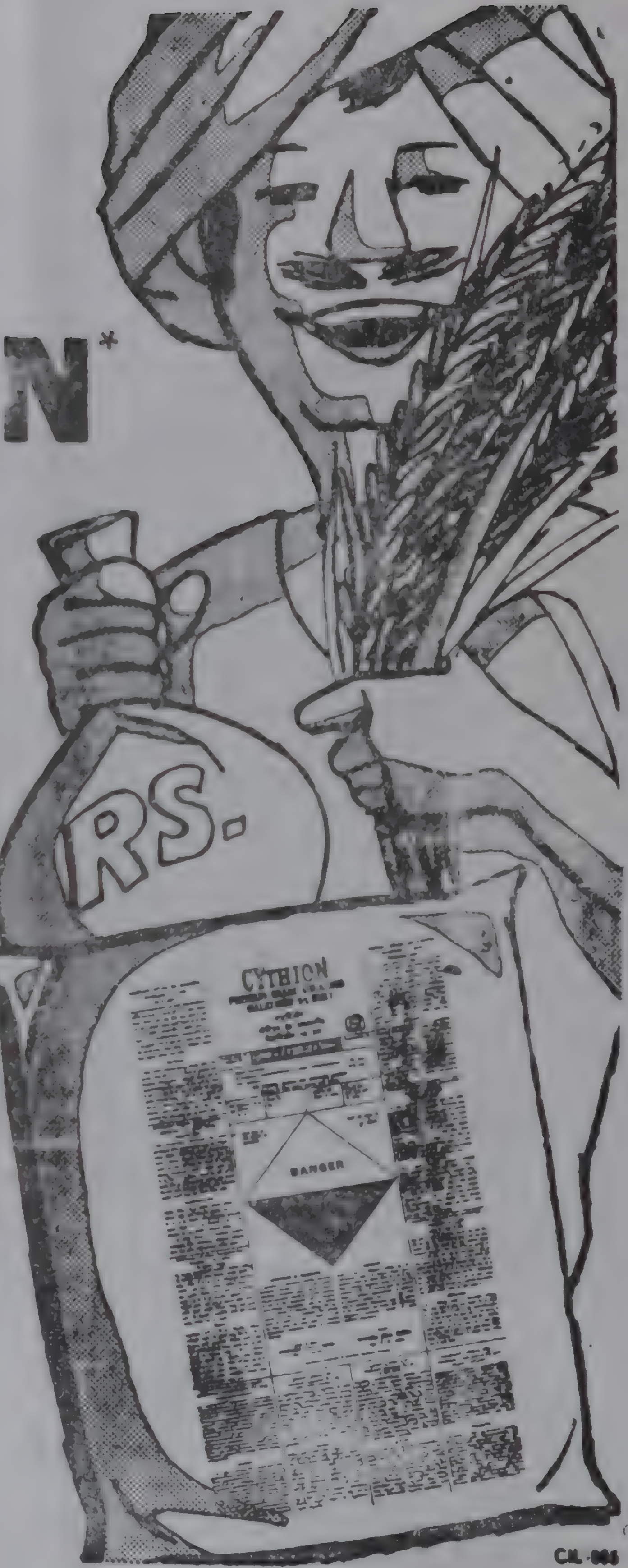

CIL-085

The scheme pertaining to duty free imports of raw materials and components for 'deemed' exports i.e. for goods to be supplied to IDA/IBRD aided projects etc. has been simplified. Supplies can now be made under the scheme soon after the application for import of raw materials and components has been made without waiting for actual issue of the licence. The scope of Duty Free Scheme for imports against REP licences has been enlarged, by adding new items therein.

Manufacturer–exporters having annual exports of at least 50% of their production of select products, subject to a minimum of Rs. 5 lakhs will have a much wider choice in the selection of items to be imported within the value of their REP licences. This would enable them to adjust their imports according to their production and export programme. The flexibility of the utilisation of REP licences which was hitherto available only to manufacturers, has now been extended to Trading Houses and Export Houses, for providing better service to their supporting manufacturers in the matter of distribution of imported input. For this purpose, the Trading and Export Houses will furnish, in advance, a list of their supporting manufacturers to whom alone they would supply imported raw materials.

Exporters able to penetrate into new markets or introducing new markets or introducing new export products will be eligible for relatively higher import replenishments.

In order to help manufacturer–exporters, requiring small value equipment for their own use, the maximum value limit upto which REP licences can be used for import of machinery without procedural formalities, has been raised from Rs.50,000/- to Rs. 1.0 lakh.

Actual users exporting at least 25% of their production of select products subject to a minimum of Rs. 5 lakhs or those exporting select products of not less than Rs. 1 crore annually, have been allowed to utilise their automatic and supplementary import licences irrespective of their value, on a repeat basis. Actual users with comparatively higher export performance i.e. who exported at least 50% of their production of select products, will have the choice to make use of the repeat operation facility of thier supplementary licence, or to obtain a fresh supplementary licence for 1983-84. Application for the fresh supplementary licence will not require any sponsorship but its value will be confined upto 50% of the value of the automatic licence issued to the same unit. The facility of issuing fresh supplementary licence for 1983-84 without sponsorship, referred to above, will be available to small scale units which exported at least 25% of production of their select products (as against 50% for others) subject to a minimum of Rs. 5.0 lakhs or which exported select products of at least Rs.1.0 crore in value (FOB) in any of the two previous financial years.

Trading Houses and Export Houses :

The minimum level of qualifying exports of select products for recognition of Export Houses has been raised. It will now be Rs 2.0 crores for Export Houses other than SSI units, and Rs. 50 lakhs for Export Houses belonging to the Small Scale sector. In the case of the latter, the limit of Rs.50 lakhs will apply either individually or as a consortium of SSI units. Existing units will, however, be given time to achieve these levels.

The entitlement for additional licence to Export Houses has been reduced. This reduction in the entitlement will not, however, apply to the net part of the growth in exports of those Export Houses which have increased their exports by at least 50% of the previous level. In order to make imports against additional licences more economical and purposeful, the value limit for import of individual items have been suitably relaxed.

Trading Houses planning to achieve a growth in their exports of select products by at least 50% more than the normal growth rate prescribed for them, will be given a comparatively higher value limit for import of canalised items against their additional licences exclusively for export production.

Other Highlights :

The facility of imports of OGL items by Trading Houses and Export Houses without debit to the import licence value has been withdrawn.

Incentive has been provided for those exporters who opt to surrender their valid REP Licences against which they have otherwise, the liberty to import banned and limited permissible items as replenishment of inputs used in exports. The value of such surrendered licence will be treated as export in computing export performance of the concerned exporters for certain benefits available under the import policy.

Applications for import of machinery and other items required for agricultural exports will be given special consideration. For machinery imports in this category, the requirements of capital goods procedure have been waived.

Export Control :

As before, most of the commodities will remain outside the purview of export control. The ban on export of sugarcane and Khandsari sugar has been lifted and these items have been placed on OGL. Other items added to the OGL list include butter, peanut, jaggery, barley and compound cattle and poultry feeds. Export of non–basmati rice will not normally be allowed. Export of castor oil to general currency area has been decanalised. Export of groundnut extractions has been decanalised and will now be allowed within the limited ceiling. Some of the minimum export prices of commodities have been raised.

Procedural Matters

Enough attention has been given to minimise delays in procedural matters. To this end, application forms have been further simplified and streamlined forquick disposal. The work pertaining to the grant of REP licences to exporters has been completely decentralised. This is expected to particularly benefit small exporters.

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OVERSEAS TRADE ENQUIRIES

List of Trade Enquiries Received at the Indian Trade Exhibition, Kuwait

1. Mr. Abder Razzakhani Shihabi,
   P.O. Box 8449, Salmia,
   Kuwait.
   Cardamom

2. Mr. Anwar R Saker,
   D.C.C.A.,
   P.O. Box 17, Safat,
   Kuwait.
   Cardamom

3. Mr. Abde Ali,
   Saud Ibrahim Al-Freh,
   P.O. Box 2644,
   Safat,
   Kuwait.
   Cardamom

4. Mr. John D Kesari,
   P.O. Box 2785,
   Salmiah,
   Kuwait.
   Cardamom

5. Mr. Sabri Daij Al-Daiji,
   Al-Daiji,
   P.O. Box 57211,
   Kuwait.
   Cardamom, food stuff cosmetics

6. Mr. Al-Sa'eed Exhibition,
   P.O. Box 7778,
   Fahaheel,
   Kuwait.
   Cardamom

7. Mr. Satish Kumar Dogra,
   B.N.B. (P.E.D.),
   P.O. Box 177, Safat,
   Kuwait.
   Cardamom

8. Mr. Ali Mohamed Zaman,
   P.O. Box 25654,
   Safat,
   Kuwait.
   Food Stuffs

9. Mr. Mohamed Ishaq Khokhar,
   Jassim N Saleh General Trading Corpn.,
   P.O. Box 4790,
   Safat,
   Kuwait.
   Biscuits

10. Mr. Wagdi Chehata Attallah,
    Al luaij Trading & Contracting,
    Middle East Airways Bldg.,
    Fahd Al Salem,
    Kuwait.
    Cardamom, General Trading

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News Shorts

Chairman's Telephone Numbers Changed

The telephone numbers of the office and the residence of the Chairman, Cardamom Board have been changed. The new numbers are:

Office (Personal)	: 30837
Residence	: 30340

All other telephone numbers in the HQ of the Board remain uncharged.

Pamphlets on Cardamom planting practices for free distribution

Cardamom Board has released pamphlets on cardamom cultivation practices in four languages viz English, Malayalam, Tamil and Kannada. Separate folders have been brought out on the following topics:

1. Planting practices
2. Mulching practices
3. Shade Management
4. Cardamom Nursery and its maintenance
5. Important pests of cardamom
6. Important diseases of cardamom

Planters interested to have the above mentioned pamphlets may write to the Publicity Officer, Cardamom Board, Cochin-682018 specifying the pamphlets required.

Council on Economic Policy

The Prime Minister has set up a five-member council of economists to advise her on specific issues relating to economic policy and development. To be headed by the former Member of Planning Commission, Dr. Sukhumoy Chakravarti, the council will include Dr. K.N. Raj, Dr. Manmohan Singh, Governor, Reserve Bank, Dr. A.M. Khusro and Dr. C.H. Hanumantha Rao, Members, Planning commission. The Council will report directly to the Prime Minister on issues referred by her and also consider such issues as the members themselves would like to bring up for the Prime Minister's attention. Initially, the tenure of the council would be for a period of two years. Meanwhile, another high power panel of economists is reportedly to be set up by the Prime Minister to advise the Planning Commission on balanced regional development. The composition of the panel is being finalised. The panel is expected to help the Government on specific issues relating to the economic development of States and regions and to do away with the adhoc arrangements hitherto carried out by the Commission for consulting experts and economists on vital subjects.

India's Exports

A book entitled "India's Exports" by Martin Wolf, has been publishedby the Oxford University Press. The book is a concrete symbol of the banks constant interest in the export performance of its members, and particularly that of India. Given the present international situation, the World Bank entered into a dialogue with the Indian authorities on the export policy, which initiated itself with the objective of increasing the volume of export by around 8-10 per cent a year. Additionally, research on individual export categories and commodities helped to assess the plausibility of the set targets as prepared by the Indian Government. In this context, the book was developed towards giving an overview of the total export situation, and in particular the export policy and its relation to performance.

Liaison Office, Madras - shifted

The office of the Liaison Officer, Cardamom Board, Madras hitherto functioning at Alwarpet has been shifted to a new premises at Shastri Nagar. The new address is:

22, 7th Cross Street,
Shastri Nagar,
MADRAS-600 020.
Phone: 76162

Exim Bank extends Line of Credit

The Exim Bank of India has signed a line of credit agreement of $ 10 million under its re-lending facility to overseas banks, with the Hong Kong, at Bombay recently. The credit is to be utilised by the latter for financing the export of capital goods on deferred credit terms and will be relent by it to its customers who are end-buyers outside India of Indian capital goods, equipment and allied services.

Import Policy for export units liberalised

Government has decided to allow manufacturers-exporters to import machinery up to a ceiling of Rs.50 lakhs, in case they exported a minimum 50 per cent of their production with a minimum of Rs.5 lakhs f.o.b. in any of the provious two years. Earlier, manufacturers-exporters were permitted to import machinery up to Rs.20 lakhs against REP licences in a year without the need for indigenous clearance, essentiality certificates and other capital goods licensing procedures.

Henceforth, under the changed policy it would be left to the manufacturer to utilise his own REP licence or to acquire REP licences from other exporters for the import of machinery. The above is intended to provide an easier approach to exporting units to modernise themselves if they are already contributing substantially to export efforts. Additionally, it has been decided to raise the upper limit for automatic licences issues to actual users to Rs. 1.5 lakhs.

Further, Government has decided to include a provision in the import policy to permit the sale of goods manufactured in free trade zones in India to a licence holder in the automatic tariff area to an extent of 25 per cent of the production of the item by the unit concerned. Such sales are to be monitored by the Development Commissioner of the concerned zone and is expected to meet a long standing demand of units located in such zones. Additionally, it has clarified that where canalising agencies were unable to supply materials within three months from the date of payment of earnest money by the actual users, it would be open to the users to approach the licensing office directly for import to cover a part of the demand so unfulfilled.

Status Reports of overseas companies

Trade Development Authority would be offering facilities for interested Indian exporters to obtain status reports of the companies in U.S.A and West European countries excluding Sweden. The full address of the overseas firms, mode of payment to be made, financial status and performance record of the company in the past and present years, the nature of the activities have all been dealt in the report. The cost for one report is Rs.225/– but yearly subscription is Rs.1,200/– for a maximum of ten reports. Interested firms may please send the names and addresses of Importers in regard of whom the status reports are needed to the Trade Information and Statistics Division, Trade Development Authority, New Delhi, along with a demand draft for the required amount drawn in favour of Secretary, Trade Development Authority, New Delhi.

Concessional freight rates for Jeddah and Sannah

Air India has obtained the approval of Saudi Arabian Government for a mandatory air freight rate of Rs.10/–per kg. in respect of export of spices, including cardamom carrying a minimum weight of 250 kgs. on Delhi/Bombay–Jeddah Sector.

As regards exports to Sannah, Air India has secured a specific commodity rate of Rs.10/- per kg. in respect of spices carrying a minimum weight of 250 kgs. on Bombay-Sannah Sector.

The mandatory air freight rates on Delhi/Bombay–Jeddah Sector has come into effect from 19 May 1983 and the specific commodity rate on Bombay-Sannah Sector from 1st July 1983.

IIFT trained export executives available for employment

Participants of the Indian Institute of Foreign Trade's Post Graduate Diploma Programme in International Trade (1982-83), are available for employment as foreign trade executives.

The Diploma Programme is a full time course of one-year duration and includes comprehensive courses on 'International Marketing and Foreign Trade Management'.

Study of a foreign language, in-company training, and a two-week visit to a foreign country for undertaking marketing research are other important constituents of the programme. The participants are qualified in different disciplines, such as engineering, business administration, science and humanities, and are amongst the best students from universities, having been selected on the basis of all-India competitive test. Many of them possess working experience as well.

For further information please contact:-

Sri. I.N. Tandon, Secretary,
Indian Institute of Foreign
Trade, Ashok Bhavan,
93, Nehru place,
New Delhi-110019.

Export processing zone at Cochin and Madras

An Export Processing Zone is likely to be set up in Cochin. The Central Government is reported to have approved the Kerala Government's proposal in this regard.

The Government of India is also reported to have agreed to a request of the Tamil Nadu Govenment to set up a Zone in Madras. These two zones will be among the five Export Processing Zones proposed to be set up in the country.

There are at present two such zones, one in Kandla and the other in Santa Cruz. Capital goods could be imported into the zone without Customs duties and other formalities and used for the manufacture of goods exclusively for export.

COMMERCE MINISTER ANNOUNCE REPLANTATION SCHEME

Smt. Ram Dulari Sinha, Union Minister of State for Commerce paid a three-day visit to Kerala from July 19-21. The Minister held discussions with the officials of the Cardamom Board, the Spices Export Promotion Council, the Rubber Board and the Marine Products Export Development Authority, and with the representatives of the Planters' Associations including the small rubber and cardamom growers at Kottayam and Cochin. At the meeting the Minister announced the approval of Government of India for the ambitious Replantation-Cum-Subsidy Scheme for Cardamom submitted by the Cardamom Board to revamp the cardamom industry which had been suffering from unprecedented drought. In fact, this scheme is meant to counter the long term adverse effects of the drought on producfion and exports. The Minister also asked the Board officials to work out other suitable steps, to help the growers hit by the drought and to bring back the affected industry to its normal footing. She also announced that Cardamom Board has already started distribution of 15 lakh seedlings at highly subsidised rates to the affected planters.

The planters at the meeting requested the Minister for extension of the Replantation Subsidy Scheme to large holdings also and to provide enhanced outlays on subsidies for sprinkler irrigation and for supply of pumpsets and minor irrigation facilities. The Minister also assured them to take up with the State Governments the problems of rubber and cardamom growers with regard to their pleas for remission of taxes and moratorium on bank loans.

During her stay at Cochin, the Minister discussed the problems of the growers with the State Chief Minister and urged for more liberal assistance to them.

Cardamom Replanting Loan-cum-subsidy scheme

The Cardamom Replanting Loan-cum-Subsidy Scheme of Cardamom Board with a financial outlay of about Rs.4 crores has been sanctioned by Government of India. In order to enable the growers to avail of the benefits under the scheme during the current planting season also, the Board proposes to consider plantations where replanting has already been carried out during the current planting season. All registered cardamom growers owning up to 8 hectares (20 acres) are eligible to avail the benefits of the scheme. Details on the working of the scheme and prescribed application forms are available free of cost from all Field Offices/Zonal Offices/ Head Office of Cardamom Board. Applications duly filled in along with necessary documents should be submitted to the Field Officer of the concerned area before 30th September, 1983. The nearest office of the Cardamom Board may be contacted immediately for further details of the scheme and application forms.

Industry Snippets

Energy from biomass

Of all the potential alternative renewable fuels available in India, the one that is most neglected is the biomass from agricultural and forest residues. It has been estimated that more than 200 million tonnes per year of agricultural residues are produced in India compared to 130 million tonnes of wood. Of this total agricultural residues, about 80 million tonnes, equivalent to 54 million tonnes of coal in energy content can be attributed to only rice cultivation in the form of rice straw and rice husk.

In addition, with 23 per cent of land under forest, a significant amound of collectable forest wastes like pine needles and other foliage and mill wastes like saw dust are available for energy. In Himachal Pradesh alone, even if 60 per cent felled pine needles are collected and utilized for energy, it can meet 24 per cent of the state's fuel demand for domestic purposes. Considering that the pine needles only constitute 6.2 per cent of the total forest area in the state, it is no exaggeration that with other biomass waste materials made available, the entire needs of the state for domestic fuel can be met without putting an axe to a single tree for firewood.

The direct burning of wood or biomass is highly inefficient giving only 8-11 per cent useful energy. Because of extensive smoke formation, it is most inconvenient and pollutant fuel. The correct method is that these wastes be converted into smokeless briquetted fuels. These briquetted and/or pelletised fuels from biomass have been named as Paru fuels. Paru in Sanskrit means energy from sun.

Storage and infestation control

Radiative and evaporative space cooling for short term storage of fresh farm produce.

There is a strongly felt need in third world countries for a low cost, simple device for cooled short term storage of fresh farm produce. In hot dry regions, radiative cooling can be supplemented by evaporative cooling to get larger temperature drop from the ambient. An experimental chamber thermally insulated all round except for the top, which utilised radiative/evaporative cooling has been developed. Inside the chamber, temperature drop of 12°C below the ambient was obtained during the night. If the top is covered with an insulator during daytime the cooled state persists during the day also.

Food additives

New Artificial Sweetner

Biopherics, Inc., Rockville, MD, has received a patent for a no-calorie sugar that could eventually replace saccharin. The product is virtually identical in taste and appearance to regular sugar, but its molecules are arranged in reverse fashion. This "left-handed" or L-sugar cannot be metabolized and thus passes through the body without being absorbed. The company is not yet manufacturing the product on a commercial scale and must receive FDA approval for a new food additive after extensive testing.

Extending shelf life of fish

Food scientists at Cornell University, Ithaca, NY, have developed a method that doubles the shelf life of fresh fish. Professor Robert Zall and graduate student Stephen Kelleher have discovered that by blanching fish, dipping it into hot water for two seconds before storing on ice, the time that the freshness of the fish remains excellent almost doubles. According to Zall, blanching fish destroys the bacteria and its enzymes that are responsible for most of fish spoilage, yet the heat never penetrates further than the outer skinlayer. Cornell's food scientists have tested cod and hake, using standard quality measurements. They have found no difference between one-week-old blanched fish and freshly caught fish considering biological, chemical, biochemical, taste, texture, odour, or other sensory factors The optimal water temperature for blanching is 190°F (88 C) for 2 sec. but quickly steaming fish for two-tenths of a second also will double the shelf life of fresh fish and maintain its quality.

Flying-insect killer

Following 10 years of research and development, Whitmires' 'Lure Stic' is being marketed as a significant method of killing flying insects without using chemical insecticides. With this concept, three-dimensional fly decoys are printed in various normal positions, and look alive, on bright orange paper rods (dimensions: 610 mm x 50 mm). These decoys trick other flying insects into joining them, where they are totally trapped to die on the sticky surface. The Lure Stic is designed to be effective in food-processing plants, test laboratories, supermarkets and kitchens.

Solar cabinet for chilli drying

The Central Institute of Agricultural Engineering has designed a low-cost solar cabinet which rapidly dries chillies, an important cash crop in India The dryer performs well in comparison with sun-drying on other surfaces such as tarpaulin (oliver green), black polyethylene, cement concrete floor and mud floor. In performance tests, the most rapid drying rate was achieved by the solar cabinet. Tests are still being carried out to improve the dryer's efficiency.

Solar wood stove

A wood stove manufacturer has just introduced a unique combination stove and solar panel water heating system for the US domestic market. The Lin-Thompson Co., has combined its vertical draft wood stoves with Radco solar panels to heat 50 or 82 gallon water tanks. The system is microprocessor controlled and activated by room and water temperature sensors that operate the stove and three Grundfos water pumps. The 68,000-85,000 BTU/hr stove heats an externally mounted copper pipe boiler to feed a DHW storage tank. The tank is also connected to a set of two glycol-filled solar panels, which feed a counter-flow, three-walled exchanger. The panel system, the heat exchanger and the stove boiler are all separately pumped. When the stove boiler or solar panel temperature, reaches a value 16°F above storage tank temperature, the microprocessor triggers a pump to circulate water until the solar panel or boiler temperature is within 5°F of the storage tank temperature. A safety valve vents pressures above 145 psi.

Gas sterilization unit

Modular gas sterilization unit for use in sterilizing foods, features a modular design so that the capacity of the sterilizer may be increased more easily. The units have fully automatic controls, and microprocessor-based data logging quality and process controls are available. The units have standard cross section dimensions of 4 ft. 6 in in width and 6 ft 7 in. in height. Lengths vary with capacity requirements.

Terpeneless citrus oils

A process developed by the Central Food Technological Research Institute, Mysore, now makes it possible to produce indigenously high quality terpeneless citrus oils used for imparting flavour and aroma in foods, beverages and perfumery.

Citrus oils contain 80-95 per cent terpenes, which tend to deteriorate rapidly and develop off-flavours as a result of their oxidative and photo-chemical transformation. The terpenes have to be removed partially or completely before the oils are used for flavour and aroma. Several deterpenation methods such as fractional distillation in vacuum, counter-current extraction, column chromatography and hydrotrobic are known to be employed in the removal of terpenes, but the details are well-kept secrets.

Since the soft drink industry in India is expanding, large-scale production of terpeneless citrus oils has a good potential.

The process involves the use of activated adsorbents and organic solvents. Both the terpenes and terpeneless oils are recovered by distilling the solvents.

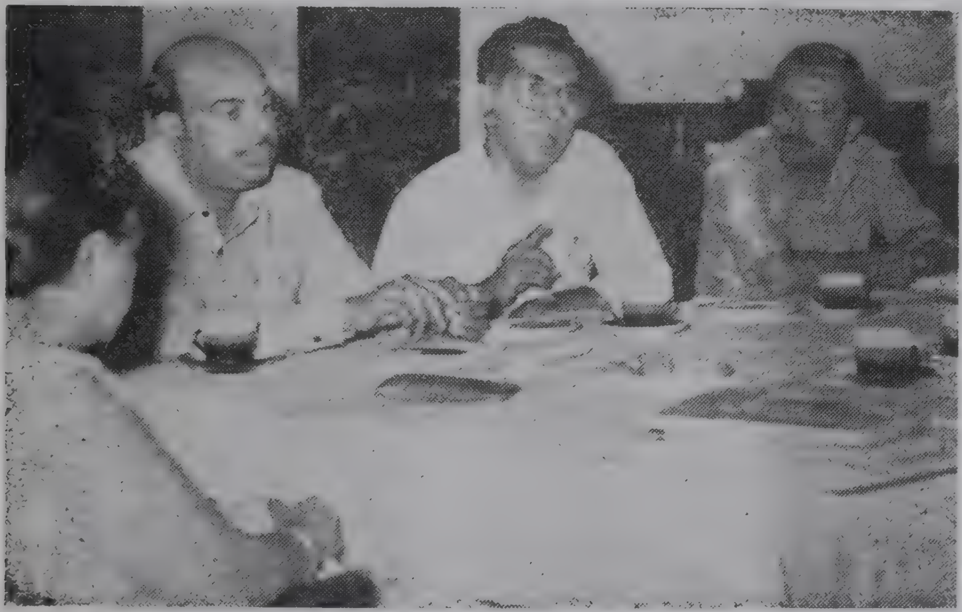
PHOTO FEATURE

Union Minister of State for Commerce, Smt. Ram Dulari Sinha is being garlanded by Mr. K. S. Skaria Jr., Vice-Chairman, Cardamom Board during the former's visit to Cochin recently.

Mr. K. G. Nayar, Secretary and Mr. A. Shahjahan, Publicity Officer, Cardamom Board explaining to Smt. Ram Dulari Sinha the characteristic features of a cardamom plant with the help of a model.

Smt. Ram Dulari Sinha along with the officers of Cardamom Board and representatives of cardamom trade interests at the meeting held at Government Guest House, Cochin

Smt. Ram Dulari Sinha and Mr. Pawan Chopra, Director, Ministry of Commerce, during the meeting at the Government Guest House.



From left - Smt. Ram Dulari Sinha; Union Minister of State for Commerce, Mr N.P.K. Sinha IRS, Special Assistant to the Minister; Mr. K.S. Skaria Jr. Vice-Chairman, Cardamom Board and Mr. N. Bharathan Pillai, Deputy Director (Marketing), Cardamom Board, at the meeting at the Government Guest House, Cochin.

Another view of the participating officials during the meeting with the minister at Govt Guest House, Cochin. From right-Mr Pawan Chopra, Director, Ministry of Commerce; Mr.K.G. Nayar, Secretary, Cardamom Board and Mr. John M John, Director-in-Charge, Cardamom Board.

Monthly Statistical Abstract - June 1983

Production

On the basis of the latest assessment of field position the production of small cardamom for 1982-83 season is estimated as 2900 M. T. with State-wise break-up as indicated below:

Kerala	1900 M.T.
Karnataka	800 ,,
Tamilnadu	200 ,,
Total (India)	2900 M.T.

Auction Sales and Prices

The State-wise auction sales and prices of small cardamom during the current year and previous year are given in Table-1.

TABLE-1

State	June '83		June '82		Aug-June '83		Aug-June'82	
	Qty (MT)	Ave. price (Rs/kg)	Qty (MT)	Ave price (Rs/kg)	Qty (MT)	Ave price (Rs kg)	Qty (MT)	Ave.price (Rs/kg)
Kerala	3	—	1	128.97	1208	158.30	2187	120.76
Tamilnadu	3	238.41	2	140.63	72	157.01	116	103 21
Karnataka	14	275.72	6	153.00	733	165.24	802	104.37
Total	17	270 22	9	148.30	2013	160.78	3105	115.87

From the above table it may be seen that the auction sales during June '83 was almost double and the average price has indicated an increase by Rs. 122 per kg. compared to June '82. Though cumulative total sales for August-June '83 has come down by 1092 M. T., the average price has gone up to the tune of Rs. 45 per kg. The decrease in sales is mainly due to the fall in production and consequent poor arrivals in the main auction centres of all the three cardamom growing states.

Export

Month-wise provisional figures of cardamom exported during 1983-84 received from the Customs Authorities on the basis of shipping bills passed compared to previous year's export compiled on the basis of date of shipments effected by the cardamom exporters are given in Table-2

It may be seen from the table-2 that during1983-84period the quantity has shown an increase of 2% and the earning has gone up by 26% compared to 1982-83. A rise in the unit export price to the tune of Rs. 34 per kg has also been recorded during 1983-84. ☐

TABLE-2

Month	1983-84			1982-83		
	Qty (kgs)	Value (Rs)	U Value (Rs/kg)	Qty (kgs)	Value (Rs)	U. Value (Rs/kg)
April	112646	20277443	180.01	26800	3347404	120.41
May	13865	2574353	185.67	89860	13636396	151.75
June	14500	2177346	150.16	20950	2802955	133.79
Total	141011	25029142	177.50	137610	19786755	143.79

Awards for small-scale industries

The Central Government has instituted national awards for outstanding entrepreneurs setting up small-scale inudstries. The first three awards will carry a cash award of Rs.25,000, Rs.20,000 and Rs.15,000. Additionally, a special recognition award of Rs. 10,000 would be conferred on entrepreneurs from each state and Union Territory.

The awards for 1982 would be given in 1983 and entrepreneurs who set up their enterprises during the preceding five calendar years and were registered with the State Directorate of Industries would be considered eligible for the special recognition award.

AUCTION SALES AND PRICES OF CARDAMOM

Centre	June '83			June '82			August—June 1983			August—June 1982		
		Prices (Rs/kg)			Prices (Rs/kg)			Prices (Rs/kg)			Prices (Rs/kg)	
	Qty. Sold (kgs)	Max.	Average	Qty. Sold (kgs)	Max.	Average	Qty. Sold (kgs)	Max.	Average	Qty. Sold (kgs)	Max.	Average
KERALA												
Vandanmettu	—	—	—	—	—	—	812259	401.00	161.91	1288684	243.40	123.09
Santhanpara	—	—	—	—	—	—	241126	272.00	147.73	417413	226.90	109.34
Udumbanchola	—	No Auction	—	—	—	—	—	—	—	1273	127.60	113.97
Kumily	—	—	—	—	—	—	133227	370.50	156.22	439674	226.90	125.46
Kallar	—	—	—	—	—	—	3618	159.00	139.13	—	—	—
Cochin	—	—	—	556	176.10	128.97	17381	250.00	155.87	18917	200.00	112.91
Kajanapara	—	—	—	—	—	—	—	—	—	20861	148.90	113.81
TOTAL (KERALA)	—	—	—	556	176.10	128.97	1207611	401.00	158.30	2186822	243.40	120.76
TAMILNADU												
Pattiveeranpatty	2479	376.00	238.41	2149	159.10	140.63	68104	376.00	156.00	73609	180.10	107.59
Bodinayakanur	—	—	—	—	—	—	4264	178.00	125.20	42343	138.00	95.60
TOTAL (TAMILNADU)	2479	376.00	238.41	2149	159.10	140.63	72368	376.00	157.01	115952	180.10	103.21
KARNATAKA												
Somwarpet	—	—	—	—	—	—	846	227.10	186.18	478	95.00	83.24
Mercara	—	—	—	—		—	69146	300.00	165.48	83566	172.50	108.93
Mangalore	5291	283.00	248.75	—	—	—	59167	283.00	179.88	101696	160.00	106.08
Saklaspur	8756	375.00	291.49	5428	218.50	153.15	569460	375.00	164.77	586778	244.00	103.67
Sirsi	206	317.00	298.30	334	180.00	151.99	23593	317.00	147.76	24161	180.00	100.06
Siddapur	71	292.00	275.00	34	154.55	139.30	9830	292.00	147.00	5620	156.99	98.83
Kansur	—	—	—	—	—	—	1417	182.29	137.85	—	—	—
TOTAL (KARNATAKA)	14324	375.00	275.72	5796	218.50	153.00	733459	375.00	165.24	802299	244.00	104.37
GRAND TOTAL	16803	376.00	270.22	8501	218.50	148.30	2013438	401.00	160.78	3105073	244.00	115.87

CULTIVATION OPERATIONS

SEPTEMBER	South-West Monsoon areas (Kerala-Tamilnadu)	North-East Monsoon areas (Tamilnadu)	South-West Monsoon areas (Karnataka)
Primary Nursery	No work	Watering and routine upkeep. Selection of high yielding and desease - free plants for seed collection for the next season's primary nursery.	Collection of seed capsules and preparation of seeds. Sowing in lines. Cover seeds with a thin layer of soil and mulch with Lantana or paddy straw. Regular watering Collection of pandal materials.
Secondary Nursery	First round weeding continued and completed. Routine plant protection measures for control of pests and diseases. Watering as required Earthing up and rectifying beds to be taken up during break in Monsoon rains.	Routine upkeep and watering in the existing secondary nursery. In the new site, second round digging. Collection of pandal materials.	Routine watering, plant protection and weeding.
Starting of New Plantations	No work	First round weeding	Weeding. Scuffing. Application of farm yard manure or composit and steamed animal meet. Spray Bordeaux mixture along with suitable insecticides.
Maintenance in Plantations	First round harvest continued and completed. Second round weeding continued. Thrips control. First round of maintenance of footpaths and drainage channels. Shade ragulation. Fork digging. Manuring if there is a break in the rains.	First round harvest continued. Thrips control.	Second round manuring. Spraying Bordeaux mixture along with suitable insecticide. Crop harvest, curing, storage etc.

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MAESOPSIS EMINII: A fast growing shade tree introduced in cardamom estate

By

V. S. KORIKANTHIMATH

Central Plantation Crops Research Institute, Research Centre, Appangala, Mercara.

Cardamom is a psiophyte (shade-loving plant) commonly cultivated as an under growth in the tropical wet and moist evergreen forests of the Western Ghats of South India. Proper and adequate shade regulate soil moisture and temperature of the garden.

In recent years indiscriminate felling of trees has disturbed the natural ecosystem to a considerable extent. Added to this, natural felling of old shade trees in the estates is not an uncommon problem. Hence, in certain areas cardamom plants are devoid of adequate shade. Therefore, it is highly essential to plant some of the growing shade tree species which can put up sufficient flush and canopy to provide a suitable microclimate in the open areas of the estate. The main considerations while selecting the shade tree species are adaptability to the climate, rate of growth, ease of establishment etc.

Maesopsis eminii Engl. Synonym, *M. berchemoides* A. chev., Family-Rhamnaceae, commonly known as African shade tree is an exotic from Uganda and a recent introduction in cardamom estates in India. It can be grown in areas receiving an annual rainfall of over 1500 mm. It is grown in coffee estates in Hassan District, Karnataka State at an elevation of approximately 915 M with a rainfall between 1200–2500 mm, very successfully as a shade tree

Botanical Description:

It is a fast growing deciduous tree, usually 15–27 M high, sometimes attaining 42 M, Bole shortly and bluntly buttressed, cylindrical, straight, free from branches for 9-21 M. Bark is thick, pale grey to almost white, deeply fissured. Slash is pale red merging to yellow white. Crown is rounded when mature and usually flattened in young tree, where the leading shoot is generally at a lower level than the surrounding branches. Leaves are glossy, remotedly toothed, measuring 7.5-15 cm long 2.5-5.0 cm broad, and petiole about 0.83 cm long. Flowers are small, green, in rusty-pubescent axillary cymes. Drupe is yellow, turning black on falling, oblong, about 2.54cm long. Sapwood is nearly white, sharply defined upto 7.6 cm thick, heartwood bright yellow-green when freshly cut, usually turning pale golden brown on exposure. It is scentless when seasoned, fairly soft but firm, medium and even in texture".

The tree starts bearing 5–6 years after planting. It bears every year. The fruits ripen during October-November. After maturity, the seeds fall to the ground and are collected manually.

Seed Germination:

It is better to take up sowing as early as possible once the seeds are collected from the bearing tree. About 700 seeds weigh one kg. Since the seed coat is hard, it is better to soak the seeds in water and then set in polythene bags filled with fertile soil or usual nursery mixtures for germination. shade is to be provided by erecting a pandal. Regular watering is to be continued. Normally germination takes place within 3-4 weeks. Raising seedlings directly in polythene bags is a convenient

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220 pp. Rs. 50-00 (US $ 20-00 or £ 8-00) February, 1974

Contains the full text with discussions of 45 papers read at the Symposium (plus abstracts of 8 other papers and summary of 6 papers presented at the Panel Session). The papers cover all aspects (agronomy and soil science, genetics and breeding., physiology and biochemistry, diseases and pests and processing and technology) of all the plantation crops including spices and condiments (tea, coffee, rubber, cashew, coconut, arecanut, black pepper, cardamom, clove, ginger, coriander etc.)

2. PROCEEDINGS OF THE FIRST ANNUAL SYMPOSIUM ON PLANTATION CROPS

(PLACROSYM I)

(AGRONOMY, SOILS, PHYSIOLOGY AND ECONOMICS)

KOTTAYAM (INDIA), MARCH, 1978

540 pp. Rs. 75-00 (US $ 25.00) June, 1979

Contains the full text of 54 papers read and discussed at the Symposium plus abstracts of 23 satellite papers. It contains six chapters, *viz.*, soil fertility evaluation, soil fertility and crop response, soil and water management, crop physiology, inter and mixed cropping and economics and farm management on all plantation crops (tea, coffee, rubber, cashew, coconut, arecanut, black pepper, cardamom etc.)

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(PLANT PROTECTION - ENTOMOLOGY, MICROBIOLOGY, NEMATOLOGY, PLANT PATHOLOGY AND RODENTOLOGY)

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555 pp. Price Rs. 75-00 (US $ 25) September, 1980

Contains six sections, one each on nematology and microbiology and two each on entomology and plant pathology. The plantation crops dealt with are areca, cacao, cardamom, cashew, coconut, coffee, pepper, rubber and tea. Full text of 72 papers on various aspects together with an abstract, is printed and after the papers in each session the main points emerging in the discussions and future lines of work are summarised.

Available from :

The Secretary
Indian Society for Plantation Crops
Central Plantation Crops Research Institute
Kasaragod 670 124, Kerala, India

practice and it avoids transplanting shock. The seedlings normally attain 25-30 cm height at transplantable age. Seedlings when they attain 2-3 months of age are planted in the field.

Planting in the estate:

Seedlings may be planted in the estate taking into consideration the topography and the monsoon pattern. The best time for planting is end of May to end of June when adequate rain is experienced. In low lying areas planting may be taken up from August onwars when the heavy rains will normally be over. Adequate drainage provisions may be made in such areas before planting.

Planting distance could be adjusted according to the openness of the estate and shade requirement. No particular after-care is required other than keeping the immediate surroundings of the plant clean, by removing the weeds.

Rate of growth:

The observations carried out on 3-5 years old *Maesopsis eminii* trees in the cardamom estates at the Research Centre, Appangala are as follows:

Place of Planting	Height (cm)	No of branches Existing	Pruned	Total	Girth of the trunk at 0.5 M above the ground. (cm)
1. Roadside and open areas*	552.7	21.05	15.72	36.77	24.20
2. Lightly shaded areas**	494.2	18.10	16.30	34.40	19.70

* observations made on 40 trees
** observations made on 21 trees

There is a remarkable rate of growth for trees planted in the roadside and open conditions as compared to the trees planted in the lightly shaded conditions within a span of 3-5 years.

The local site factors seem to have a pronounced influence on the growth of *Maesopsis eminii* Although *Maesopsis* is able to grow on different soil types, drainage seems to be the limiting factor. Being a recent introduction in cardamom estates no much information is available on the performance of this shade tree. It appears worthwhile planting this tree in the open areas and in lightly shaded conditions in view of its fast growth to get an adequate shade in cardamom estates. *Maesopsis eminii* grows much faster and can withstand the shade from neighbouring trees to a considerable extent. Unlike other shade trees it is not found to harbour leaf eating hairy caterpillers which often cause considerable damage to cardamom plants.

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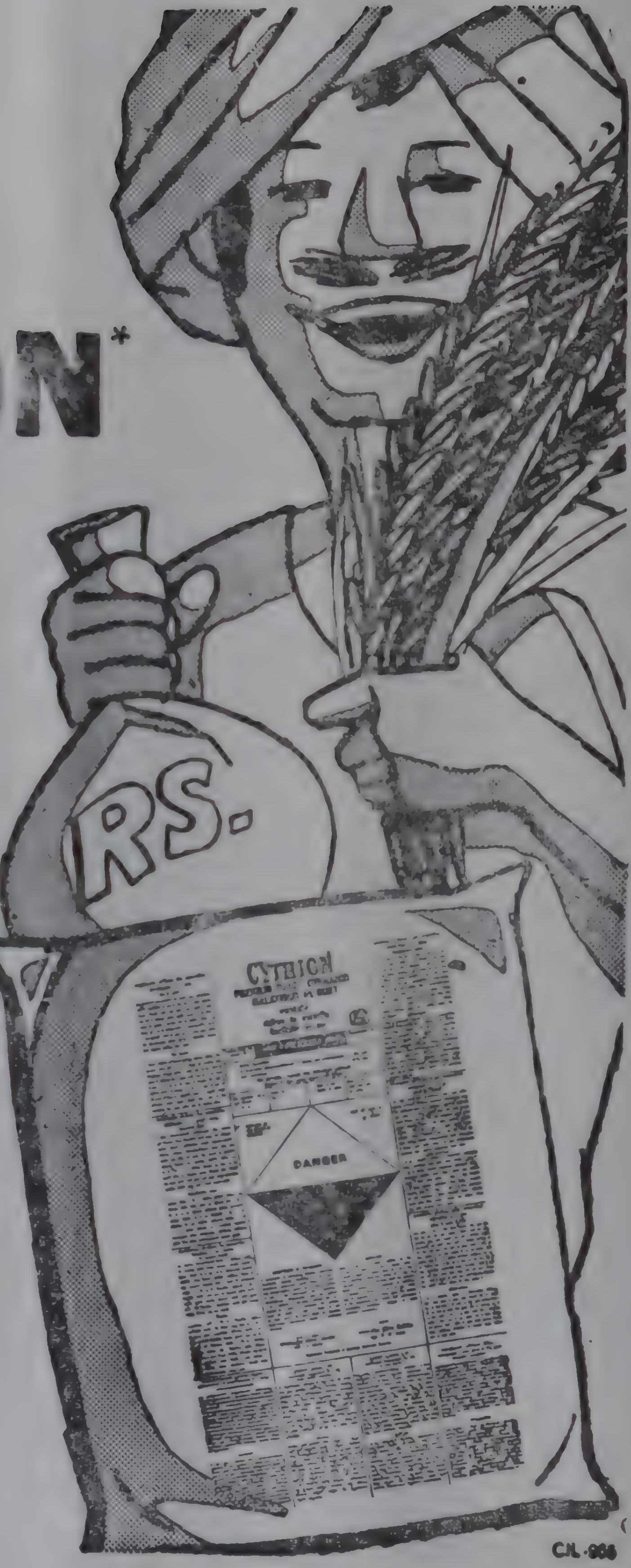

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Trade & Exports

Foreign trade organisations and chambers of commerce in USA

There are various organisations in New York which assist and promote trade. Some of the well-known ones are given below:

(i) New York Chamber of Commerce & Industry,
65 Liberty Street, New York,
N. Y. 10005.

This is one of the largest and oldest Chambers of Commerce in the country. It serves the world trade community in the New York area as a source of information on all aspects of important export procedures and for providing contacts for businessmen.

(ii) American Importers Association,
11 west 42nd Street,
New York, N. Y. 10036
Tel: (212) 944-2230.

It is the largest and most influential grouping of importers. Most of the larger, well established importers are its members AIA keeps its members informed of developments connected with imports, including changes in Governmental rules and regulations. It also circulates among its members trade enquiries received from foreign companies.

(iii) India Chamber of Commerce of America Inc.
C/o Prakash Shah,
American Express,
125 Broad Street,
New York, N. Y. 1004
Tel: (212) 480-3197

This association was established in 1938 for the mutual benefit of Indian and U.S. businessmen and firms, but has only of late become at all active. It may not be in a position yet to tackle any enquiries. Its main objective is to promote trade and investment between the two countries as well as a joint ventures in third countries. Its current membership comprises U. S. and Indian banks, U. S. multinationel corporations, Government of India undertakings which have offices in New York, as well as other companies, importers, exporters, shipping companies and others engaged in Indo-Us commercial activities.

In addition to these, there are some Indian commercial organizations in NewYork. These are:

Director of Tea Promotion,
445 Park Avenue (18th Floor),
New York, N. Y. 10022
Tel: (212) 838-4150,

Indian Investment Centre,
445 park Avenue (18 th Floor),
NewYork N,.Y10022
Tel: (212) 838-3600

Jute Manufacturers' Development Council,
500 th Avenue, Suite 4320,
New York, N. Y. 10036,
Tel; (212) 947-5640

Handicrafts & Handlooms
Export Corp. of India Ltd.
29 West 38th Street,
New York, N. Y. 10018.
Tel: (212) 354-5370.

State Trading Corporation of India,
445 Park Avenue (18th Floor),
New York, N. Y. 10022
Tel: (212) 753-0770

Trade Development Authority of India,
445 Park Avenue (18th Floor)
New York, N. Y. 10022,
Tel: (212) 753-6655.

Shipping Corporation of Indian Ltd.,
C/o Norton Lilly and Co.
90 West Street,
New York, N. Y. 10006
Tel: (212) 791-6400.

Cardamom:
Queen of spices, continuously being attacked by various pests.

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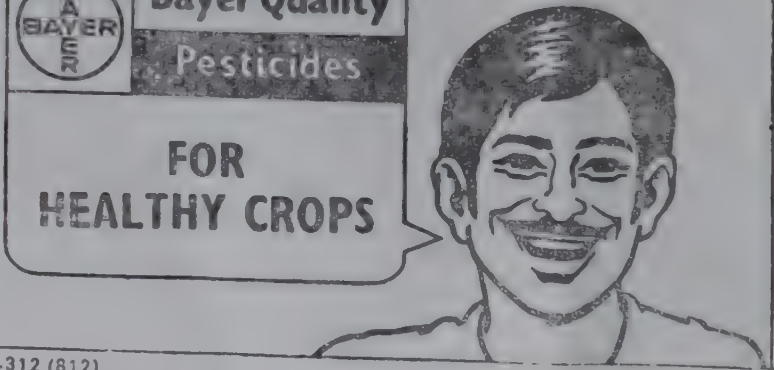
Bayer Quality
Pesticides



The major enemies of Cardamom are:

- —THRIPS
- —APHIDS
- —FRUIT BORER
- —WHITE FLIES

For the efficient control of these pests use

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Metasystox®

Metacid 50®

Lebaycid 1000®

Follow the instructions given along with the pack. For further details, contact your nearest dealer.

15-312 (812)

These should be approached in respect of their specific commodities. There are also 3 Indian banks in New York, They are:

State Bank of India,
460 Park Ave.,
New York, N Y. 10017
Tel: (212) 371 5600.

Bank of India,
277 Park Avenue,
New York, N. Y. 10017
Tel: (212) 753-6100.

Bank of Baroda,
1 Park Avenue,
New York, N. Y. 10016
Tel: (212) 578-4550.

Entry Permits to visit Nigeria

Indian visitors/businessmen coming to Nigeria should normally be issued entry permits by the Nigerian High Commission in Delhi without reference to the Department of Immigration in Lagos if the purpose of visit is:

--visits for pleasure;
--visits to explore investment opportunities;
--visits to relatives, friends and organisation in Nigeria;
--meetings; and
--transist through Nigeria.

However, those who come for any purpose, as given below, the Nigerian High Commission *will not ordinarily issue entry permits without* prior favourable recommendation, of the Director of Immigration, Federal Department of Immigration, Lagos:

--erection/installation work; feasibility studies;
--equipment/machinery repair;
--auditing of accouuts;
--research work; and
--such other similar assignment.

In such cases, the sponsoring companies or organisations in Nigeria are required to apply to the Director of Immigration in Lagos and seek his prior approval for issue of entry permits. The intending Nigerian company will be required to furnish:

(i) name in full of alien being sponsored
(ii) date & place of birth
(iii) nationality
(iv) passport number
(v) date and place of issue of passport which should be valid for more than one year from date of application to Director (Immigration).

Such persons can stay in Nigeria for six months (maximum) without being against any expatriate quota.

The Nigerian Missions generally issue *single entry* permits. Multiple entry permits are generally issued in Lagos by the Department of Immigration.

All *expatriate nationals* coming to take up employment in Nigeria can be categorised under three headings:

(i) those coming to take up employment with Government Departments, Corporations aud Institutions of Higher Learning. These are not subject to expatriate quota restriction.

(ii) those coming to take up employment with partially owned government organisations and private sector companies and organisations subject to Expatriate Quota restrictions.

(iii) as mentioned in second para above.

Expatriates coming for employment under categories (i) and (ii) above should normally apply for Entry Permits through the Nigerian Missions abroad. The Nigerian Missions have been empowered to issue Entry Permits Subject to Regularisation (i. e. three months temporary working permit). Employers are expected to apply to the Director of Immigration Services for regularisation within this period. Applications in respect of expatriates who will work with campanies and organisations which are subject to quota restriction must be accompanied by employees' credentials which have been vetted by the relevant Nigerian Mission abroad. An application for a Stay Permit must therefore be accompanied by the original copy and three photo copies of the applicant's credentials. Application for Regularisation must be made to Immigration within 14 days of arrival. Educational qualification degree/certificates should be got vetted from the Nigerian Mission before starting for Nigeria.

Industry Snippets

Powder from Honey and Fruit Juices

Kibbutz Maarbarot produces dried honey, a fine white powder which is a spraydried concentrate of molasses and honey on a base of corn syrup, glucose or malto-dextrins as a carrier. Maarbarot also produces comminuted orange, lemon, mandarin and grapefruit powders. This process involves the spray drying of the whole fruit, seed and peel and not just the juice.

Gas Sterilization Unit

Modular gas sterilization unit for use in sterilizing foods, features a modular design so that the capacity of the sterilizer may be increased more easily. The units have fully automatic controls, and microprocessor-based data logging quality and process controls are available. The units have standard cross section dimensions of 4 ft. 6 in, in width and 6 ft 7 in. in height. Lengths vary with capacity requirements.

Fibre Optic Phone Link

Some of the telephone conversations between Washington and New York have begun travelling on lightwaves instead of copper wire or microwave circuits. This marks the first large-scale regular use of fibre optics.

One pair of glass fibres can carry 1,300 phone conversations at the same time. A cable– as thick as a finger– containing 147 fibres will be able to transmit nearly one-quarter-million conversations simultaneously.

New Tanning Dye

A new progressive method of production and application of synthetic tanning dye, developed in the USSR, ensures a simultaneous additional tanning,surtannage and dyeing of leather. This is done with the help of new polymeric materials, synthetic tanning dyes, developed in the Soviet Union and manufactured in the form of a powder easily solube in water.

The new method does not require special equipment and has a vast raw material base. It imparts a broad range of colours from green to dark red.

Sugar from Sweet Sorghum

Experts of the Indian Institute of Sugarcane Research, Lucknow have been toying with the idea of utilizing sweet sorghum as a raw material for sugar production. The juice from the stalks of the plants has adequate sugar content for commercial exploitation.

Eight strains of sweet sorghum, imported from the U. S., have already been screened to ascertain their suitability for cultivation in India They have shown a potential to yield about 26 tonnes a hectare of millable stalks with about 16.0 brix value (sugar recovery).

The scientists have already succeeded in preparing gur from the juice of sweet sorghum stalks. Efforts are afoot to study the feasibility of manufacturing sugar from this juice and also to generate the necessary technology for this purpose.

Consistometer

This may be used to determine the consistency of jams, jellies, tomato paste, baby foods, yogurt, pie fillings, condensed soups, and other highly viscous products. Made of stainless steel, the instrument determines sample consistency by measuring the distance which a material flows under its own weight during a given time interval. It's gate is spring operated and held by a positive release mechanism permitting instantaneous flow of sample. The trough is graduated in 0 5 cm divisions to permit accurate measurement of flow. The unit measures 14 in. x 3½ in. x 5½ in. and weighs. 1.7 lb.

Pollution-Free Garbage Handling

A new hydraulic equipment for garbage handling has been developed. The equipment is known as Roll off. Tipper is not only very economic in handling garbage but also eliminates the pollution hazards faced by garbage handling worker.

Roll Off. Tipper companies of a truce chassis fitted with hydraulic lifting and tipping system and containers with over 10 cubic metre capacity. During the entire operation of garbage handling no worker comes into physical contact with the garbage. A driver-cum-operator can handle all operations of collection of the containers and disposal of the garbage.

More from: *Indian Hydraulic Industries (P) Ltd., 70, Industrial, Area Shivaji Marg, New Delhi-15.*

Automatic Food Sorter

An automatic food sorting machine from Britain should prove useful to food packers and processors. It is designed to handle wet, fresh or frozen food products. It incorporates an optical system to identify differences in surface colour which could denote a poor quality item.

The Sortex 1583, which conforms to all relevant international regulations for the food and agricultural industries, is easy to operate. An entire bank of machines, once set to perform a particular task, can be monitored by a single unskilled operator. LED indicators show at a glance any deviation from normal, and solid state electronic circuitry ensures reliability and low maintenance requiremets.

Products ranging in size from small cocktail onions and diced vegetables to french fried potatoes are individually inspected by sensors which detect rejects and pass electronic signals to an ejector bank. High speed valves then release jets of air to deflect unacceptable items away from the main steam. Throughout is 4000 kg/h and the machine can be run continuously for 24-hour periods.

An automatic washing system keeps the viewing zone free from food particles and other contaminants and all parts in contact with food are of stainless steel. Typical water consumption is 2 litre/min.

Fuel Gas from Husk

For every tonne of rice that is milled 400 pounds (182 kg) of husk is produced. Chinese engineers have developed a way to convert this abundant by-product into gas that can be used as a substitute for diesel oil,

The gasfier was created by the power generating equipment design institute in Jiangsu province. Its inventors claim it is simple to operate and needs to be checked only once a week during operation and overhauled yearly during the off- season.

A pilot plant, the only one so far built in China, uses up to seven tonnes of husk a day and runs a 140 KW generator to provide power for a local factory. The cost of the electricity produced is 60 per cent lower than that generated by diesel, it is claimed. And the operation disposes of a problematic waste product in a virtually pollution free manner, unlike the usual technique of burning husk.

Originally designed as an aid project, the designs were sent to Mali in West Africa, where two plants powered by rice husk are now reported to be operating successfully.

Cheaper Biogas Plant with Mud Jars

The Centre of Science for Villages at Wardha, Maharashtra, is experimenting on a biogas plant, which brings down the cost to one fourth of that of traditional ones.

The plant is made up of a battery of 8–10 mud jars of 300 to 400 litres capacity. It has to be fed daily with 40 kg of cowdung mixed with an equal quantity of water. The first and the last mud pots are connected with smaller mud jars for the entry and exit of the cowdung slurry. These are placed at the ground level while the bigger pots are sunk into the ground up to three fourths of their height.

The pots are closed at the top and fitted with 'T' tube to connect a rubber tubing for gas transfer and at the middle height of the pot the slurry movement is interconnected with mud pipes of three inch diameter.

The plant can produce 50 cubic feet of gas, which is sufficient for cooking on one gas burner for about four hours.

THINK OF IT !!!

A LIVE FISH IN THE THROAT

Lodgement of animate foreign bodies, such as fish in the air passage, is a rare phenomenon. Occasionally, they are known to have slipped and found their way into the tracheobronchial trees of fishermen and their children who have a peculiar habit of holding fish between their teeth to prevent their escape. Such a foreign body in an infant has never been reported However two doctors. Amit Banerjee of Bhupinder Singh have reported to have come across a live fish blocking the laryngotracheal passage of an infant with fatal consequences.

An eight-month old male child, while playing on the floor unguarded, tripped a glass jar containing a few aquarium fish. The mother, who rushed on hearing the crashing noise, started gathering the pieces of broken glass and fish scattered on the floor. Suddenly she realized that the baby had become abnormally quiet and found him blue all over labouring for breath By the time medical help could be obtained, the child had a cardiorespiratory arrest. While being resuscitated, an object was found flapping between the vocal cords. On being grasped and extricated out with McGillis forceps, it was found to be a fish, 5 cm long, still alive. The child could not be revived.

It appears that the infant, apparently fascinated by the fish wriggling on the floor, picked it up and put it into his mouth as is quite apt for this age and aspirated it.

Completely obstructive laryngeal foreign bodies are notorious for their fatal consequences. In this instance, the fish must have totally blocked the larynx and the trachea leading to asphyxia and almost instaneous death. How the fish continued to be alive eludes explanation!

ATTENTION CARDAMOM GROWERS !

***MULTIPLEX** a judicious formulation of multimicro-nutrients and Plant Hormones helps in marvellous recovery of your plantations from drought, rejuvenates plants into lush health ....

*MULTIPLEX Soil Application invigorates plants to resist stresses of drought effectively.. .....

*MULTIPLEX formulation is backed by years of research and extensive field tests ....

*Try a free sample of MULTIPLEX Soil Application to convince youself of its excellent efficacy TODAY..... ...

*MULTIPLEX Folier Spray for Cardamom is already in the Market ....

Manufacturers :

KARNATAKA AGRO CHEMICALS, P. B. No. 1031,
RAJAJINAGAR, BANGALORE-560010.

News Shorts

Export trade development council in Kerala

The Kerala Government has decided to establish an Export Trade Development Council for promotionof Exports. Sri. S. Gopalan, till recently Joint Secretary in the Commerce Ministry, and presently Special Secretary in Kerala has been assigned to work out on the formation of the Kerala State Export Trade Development Council.

Payment of insurance claims in foreign currency

Recently in a meeting held in the Ministry of Commerce, some tobacco exporters raised a point relating to insurance on FOB, on CIF contracts for cargoes tendered for export at Inland Container Depots. When the Combined Transport Document is issued by the Shipping Company in respect of export cargoes being tendered at the ICDs, the Indian exporter can negotiate the same immediately and the process of getting foreign exchange in accordance with the provision of the L/C also gets completed. In the event of a loss/damage for the export goods occuring within India when the containers are in transit from the Inland Container Depots to the outlet port, and insurance claim has to be preferred by the exporter, who has taken the insurance which, in the case of FOB contracts will be in favour of the foreign buyer. Ordinarily, the foreign buyers take foreign insurance. In the case of CIF contracts, the Indian exporters may very well take insurance with the Indian organisations. In both the above cases when the claim is settled by the Indian Insurance Co. it will involve repatriation of claim amount in foreign exchange to the foreign buyers.

Since a doubt had been raised by exporters, Ministry of Commerce took up the matter with General Insurance Corporation (G I C).

The General Insurance Corporation, has since advised the Ministry that in such cases when the export proceeds have been realised in India in foreign currency and when the insurers are satisfied that the insurable interest in the goods has been passed on to the foreign buyer, the Foreign Exchange Manual allows remittance of the claim amount in foreign currency to the foreign buyer.

Therefore, the insurance claim would be payable to the overseas buyer in foreign currency to whom the benefits under the marine policy have been assigned. In the case where the sale proceeds have not been realized by the exporter in foreign currency in any approved manner the claims under such policies can only be paid in Indian rupees to the Indian exporter.

Exchange Rules To Be Simplified

The Reserve Bank of India has constituted a 9-member committee to suggest means towards simplifying and streamlining the foreign exchange control regulations of exports and imports. The committee would review the exchange control regulations relating to allied issues such as establishment of offices by Indian firms abroad. payment of commission to trade representatives, remittance of royalities, licence fees, deputation of Indian personnel abroad and foreign export services.

It would also revise the present system of delegation of powers to authorised dealers in foreign exchange and the scope for further decentralisation of the RBI's exchange control department to its Regional Offices.

Green Cards For 100% Export Units

The Commerce Ministry has decided to issue green cards to the 100% export-oriented units. The card holders will be entitled to top priority in all matters relating to the functioning of these units. The Commerce Ministry has informed all the Ministries and Departments concerned, about the green card holders and the policy of top priority being accorded to them.

The green cards are now being given to the 100% export-oriented units which are already in production and to all those which are likely to go into production in 1983. The green cards will be issued by the Export Commissioner in the Commerce Ministry on behalf of the Secretary to the Government of India, Ministry of Commerce and the Chairman, Board of approvals, for 108% export oriented units. This card will bear the particulars of the firm besides mentioning that the card holder unit is entitled to priority treatment from all concerned Central and State Government Departments.

Export Thrust To Africa Mooted

Government has directed the export promotion councils to step up their activities in order to boost exports to Africa. Towards achieving tangible results, the councils have also been instructed to fix commodity wise export targets and grant greater attention to African countries which were politically and economically considered to be more stable and where no serious payment difficulties were anticipated. The commercial office of the Indian missions in Africa is proposed to be strengthened for providing relevant information on trade to interested Indian parties.

APPLICATION DATE FOR REPLANTATION LOAN EXTENDED

The last date for receipt of application for Replantation Loan from cardamom growers has been extended to October 30, 1983. Applications from growers who have used rhizomes as planting materials for replantation will be considered only during the current planting season.

Duty-Free Imports From India Into EEC

The Indo-German Chamber of Commerce has brought out its latest publication titled" Duty-Free Imports from India into EEC". Presently, the EEC grants duty free entry for Indian goods under various schemes, viz. the GSP, the Agreement on Hand woven Fabrics of Cotton and Silk and the Agreement on Handmade Products. These schemes are open to change and are being constantly improved. The present publication attempts to give the latest position of these Schemes and act as a comprehensive guide for every exporter wishing to make use of the tariff concessions granted by the EEC.

The 168-page publication gives the complete summary of all tariff concessions in the fields of textiles, manufactured and semi-manufactured goods, processed agricultural products, etc. is priced at Rs.35/-per copy and the publication is available from: *the Secretary, Indo-German Chamber of Commerce, Maker Towers 'E' Ist Floor; (Opp. World Trade Centre) Cuffe Parade, Bombay-400 005.*

AGRICULTURAL INCOME TAX RELIEF TO CARDAMOM GROWERS UNDER CONSIDERATION

Following the recommendation of the Cardamom Board to allow tax relief to cardamom growers, the Government of Kerala has decided to depute a study team to visit cardamom plantations. The team would report the extent of loss and damage caused due to unprecedented drought. The salestax and agricultural income tax officials will allow claime based on the findings of the team. The yield will be taken into consideration while computing the taxable income.

Assistance For Non-Farm Sectors

The National Bank for Agriculture and Rural Development (NABARD) has suggested that central cooperative banks (CCBs) allocate a certain percentage in their annual lending programmes for non-farm activities as well. According to it, unless such measures were taken, demands would be made for the creation of separate industrial cooperative banks catering exclusively to the needs of this sector. In an assessment of the problems and prospects of financing the non-farm sectors by the Central and State cooperative banks, the NABARD pointed out that the CCBs must take concrete steps to bring activities of weavers and other industrial cooperative societies under their financial ambit. They, therefore must make a provision for one Director on the Board of the financing banks to represent such sectors. Besides a certain portion of the fresh lending must be allocated for this sector in their annual lending plans.

Stress on Permanent Farming

The need for proper implementation of a master plan to wean tribals away from shifting cultivation and inducing them to take up permanent farming has been stressed at a workshop, held recently at Agartala. The workshop felt that the development of research and educational institutions in the North Eastern States would facilitate the working of the units of the Krishi Vigyan Kendra.

Participants in the three-day workshop, organised by the Ramkrishna Seva Kendra and sponsored by the Indian Council of Agricultural Research, placed emphasis upon imparting training to farmers and facilitating agricultural research, placed emphasis upon imparting training to farmers and facilitating agricultural research on the basis of regional and local experiences.

Prime Minister Smt. Indira Gandhi is being received by Shri T. D. John, Deputy Director, Cardamom Board at Libing, Gangtok during her visit to Sikkim recently.

Mr. Mathew Pylee, Mayor, Corporation of Cochin is seen inaugurating the Cardamom Board Stall at the Onam Fair. On the extreme left is Mr. A. Shahjahan, Publicity Officer, Cardamom Board.

Board Participates in Onam Fair

Cardamom Board participated in the Onam Fair held at Krishna vilasam Palace Grounds, Cochin. The 11-day Fair was inaugurated by Mr. Mathew Pylee, Mayor, Corporation of Cochin.

A large number of visitors visited the Board's stall, and various display materials showing the different facets of cardamom industry were exhibited. Cardamom packets, at subsidised rates, were also sold.

Thrips reduce your crop by 25% lower your price by 25% or more

Rallis 'Super-Power' Products eradicate thrips

FURADAN-3G

For thrips control without disturbing honey-bees, without affecting pollination. Applied to the soil-if you please, along with fertilisers-FURADAN enters the plant system through roots and gives from within effective and complete protection from thrips, aphids, stem and capsule borers, white flies etc. Systemic FURADAN rapidly moves into growing parts and protects new shoots and panicles from thrips attack.

Soil application of FURADAN also gives protection from nematodes, root grubs and other soil insects.

Not washed away in the rain, no drift loss. Protection for longer period. Application takes less time. Quick coverage.

Dosage: 40 grams per clump (apply when there is moisture).

ROGOR 30E

Dual action ROGOR-systemic and contact-enters the plant system within a few hours after spraying and gives protection from within. Contact action makes it very effective and versatile. Most economically priced. ROGOR for long range economical control of pests like thrips, aphids, stem and capsule borers and white flies.

Dosage. 250-400ml per acre (2 ml in 1 litre of water)

PARATAF (50 EC and 2D)

And the traditional METHYL PARATHION-the powerful contact insecticide for quick knock-down, in two formulations 50 EC for spraying and 2D for dusting. (Dusting during summer months).

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BANGALORE-560 052.

164, Linghichetty St. MADRAS-600 001

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Fairs and Exhibitions

Board to participate in five International Fair

The Cardamom Board has decided to participate in the following International Fairs and Exhibitions during 1983-84:

1.	Anuga Food Fair, Cologne, West Germany	October	15–20, 1983
2.	ASEAN Restaurant & Food Fair, Singapore	October	26–29, 1983
3.	Arab Food Industries Exhibition, Sharjah, U. A. E.	November	3–11, 1983
4.	Indian Exhibition, Jeddah, Saudi Arabia	December	22–31, 1983
5.	Hoteres & Foodex Fair, Tokyo, Japan	March	12–16, 1984

In connection with the Board's participation in the above Fairs, it may be noted that Board would be providing all assistance and guidance for cardamom exporters to send their representatives for being present at the exhibition and/for holding discussions/negotiations with importers/manufacturers of cardamom/cardamom products in these countries. This also gives an opportunity to the exporters to establish/renew their personal contacts with their clients in the countries concerned. The Board would also be happy to display their exhibits, samples etc. in its pavilion free of cost.

The cardamom exporters who are interested to participate in any of the above Fairs, may immediately get in touch with the Secretary, Cardamom Board, Cochin- 682-018, for more details.

India International Trade Fair 1983

India International Trade Fair 1983 (IITF '83) is scheduled to be held at Pragati Maidan, NewDelhi from November 14 to 27, 1983. It is the fourth in the series of annual international trade fairs, the earlier ones having been in in 1979, '81 and '82.

The IITF '83 coincides with the Commonwealth Heads of Government (CHOGM Meet) and the Fair would be visited by a number of Heads of States and delegations of the respective countries. Over 50 countries including the 43 Commonwealth countries are expected to participate. Similarly, a large number of foreign firms have indicated their keen interest to participate in IITF '83 India's leading public sector undertakings and industrial houses will be among the other important participants. Several trade delegations, foreign correspondents and opinion makers from all over the world would be present in Delhi at this time.

An important objective of the Fair is the projection of India's industrial image and its commecial potential as also to enlighten the participants from abroad about specific impor and export opportunities. The event will also offer concrete possibilities of economic co-operation among the developing countries and encourage developed partners to make new investments in India and other countries of the world.

Nearly four million visitors including businessmen and overseas delegations are expected to visit the fair.

India ranks tenth in the world as a major industrialised nation. Today, India, emerging from an agro-based nation to an industrialised one has established itself as a supplier of industrial machinery, engineering and chemical products, textiles, plastics and even nuclear technology. It has also emerged as an exporter of technical know-how consultancy services and projects.

The exhibition will be held at Pragati Maidan Complex sprawling an area of over 60 hectares under permanent pavilions and halls of covered space of 50,000 sq. metres with various infrastructural facilities. Apart from holding conferences, the Trade Fair Authority of India arranges regular programmes of quawllis dances, plays, ballets, and group performances in instrumental and vocal music, folk dances and performances for children and youth. There will be film shows as well as fashion parades. Another major attraction will be the celebration of 'National Day' by foreign participants and State Days' by various Indian States taking part in the Fair. The permanent exhibition, viz. 'Jawaharlal Nehru-His Life and His India', Defence and Energy have become special features of Pragati Maidan. Additional highlights at Pragati Maidan would be craft demonstrations at the Crafts Museum in the Village Complex.

India International Trade Fair, 1983, will present a fascinating panorama of progress achieved by India and the various participating countries of the world It will also offer opportunities for exposure of the rich cultural heritage, not only of India but also of other participating countries.

The Board would also be participating in this fair.

Anuga '83

Anuga '83 considered to be one of the world's biggest fair for food items will be held at Cologne (West Germany) from October 15th to 20th.

More than 4500 exhibitors from 81 countries will take part in this unique show which brings under one roof the latest innovations, specialities and technological developments in the world food trade.

The participation of Cardamom Board in this fair has been approved by Govt of India.

All that is 'Spice' is Gold

- Indian spices sail the seven seas all the year round satisfying gourmets the world over and earning precious foreign exchange for the nation.
- Indian spices enjoy a very good reputation and a world market that is expanding every day.

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The Spices Export Promotion Council renders the help you need to export spices. Please ask for the council's free booklet "ABOUT OURSELVES & HOW WE HELP YOU."

THE SPICES EXPORT PROMOTION COUNCIL,
"World Trade Centre", Mahatma Gandhi Road,
ERNAKULAM SOUTH, COCHIN-682 016.

(It pays to grow and export all items of spices)

Monthly Statistical Abstract - July 1983

Production

On the basis of the latest assessment of field position the production of small cardamom for 1982-83 season is estimated as 2900 M. T. with state-wise break-up as indicated below.

Kerala	1900 M. T.
Karnataka	800 ,,
Tamilnadu	200 ,,
Total	2900 M. T.

The production season for cardamom has just started. There has been failure of rain for a continuous period of about 7 months from December '82 onwards. Frequent rainfall is absolutely essential for the growth of panicles till it reaches the flowering stage. Thus the unprecedented severe drought prevailed during the current season resulted in heavy casuality of plants as well as crop loss in many of the cardamom plantations in Kerala, Karnataka and Tamilnadu. On a preliminary assessment of the field position it is estimated that there will be around 30% fall in production during 1983-84 season compared to the previous year's production.

Auction Sales and Prices

The State-wise auction sales and prices of small cardamom during the current year and previous year as follows :

TABLE—A

State	July '83		July '82		Aug-July '83		Aug-July'82	
	Qty (MT)	Ave. price (Rs/kg)	Qty (MT)	Ave. price (Rs/kg)	Qty (MT)	Ave. price (Rs/kg)	Qty (MT)	Ave.price (Rs/kg)
Kerala	—	—	—	—	1208	158.29	2187	120.76
Tamilnadu	1	252.62	1	154.50	72	158.12	117	105.25
Karnataka	4	274.64	11	151,79	740	165.93	814	104 90
Total	5	269.08	12	152.09	2020	161.08	3118	116.02

It may be seen from Table — A that auction sales during the crop season 1982-83 (August–July ,83) has recorded a decline by 1098 M. T. compared to the sales during the previous season (August-July '82). However the average price recorded an increase of Rs. 45 per kg during the current season compared to the previous season. The decrease in sales is mainly due to the fall in production on account of drought and the consequent poor arrivals in the main auction centres particularly in Kerala.

Export

Month-wise provisional figures of Cardamom exported during 1983-84 received from the Customs Authorities on the basis of shipping bills passed compared to previous year's export compiled exporters are given in Table B.

It may be seen from Table-B that even though during 1983-84 period the quantity has decreased by 19% export earnings remained slightly higher compared to 1982-83. A rise in the unit export price to the true of Rs. 34 per kg has been recorded during 1983-84 season compared to the same period of 1982-83. The reason for the decline in the quantum of export is the limited stock position in the off-season.

TABLE—B

Months	Qty (kgs)	Value (Rs)	U. Value (Rs/kg)	Qty (kgs)	Value (Rs)	U. Value (Rs/kg)
April	112646	20277443	180.01	26800	3347404	124.91
May	13915	2586853	185.90	89860	13636396	151.75
June	14500	2177346	150.16	20950	2802955	133.79
July	500	173560	347.12	36593	5308539	145.07
Total	141561	25215202	178.12	174203	25095294	144.06

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AUCTION SALES
&
PRICES OF CARDAMOM

Centre	July '83			July '82			August—July 1983			August—July 1982		
		Prices (Rs/kg)			Prices (Rs/kg)			Prices (Rs/kg)			Prices (Rs/kg)	
	Qty. Sold (kgs)	Max.	Average	Qty. Sold (kgs)	Max.	Average	Qty. Sold (kgs)	Max.	Average	Qty. Sold (kgs)	Max.	Average
KERALA												
Vandanmettu	—	—	—	—	—	—	812259	401.00	161.90	1288684	243.40	123.09
Santhanpara	—	—	—	—	—	—	241127	222.00	147.72	417413	226.90	109.34
Udumbanchola	—	—	—	—	—	—	—	—	—	1273	127.60	113.97
		NO AUCTION			NO AUCTION							
Kumily	—	—	—	—	—	—	133227	370.50	156.22	439674	226.90	125.46
Kallar	—	—	—	—	—	—	3618	159.00	139.13	—	—	—
Cochin		—	—		—	—	17381	250.00	155.87	18917	200.00	112.91
Kajanapara	—	—	—	—	—	—	—	—	—	20861	148.90	113.81
TOTAL (KERALA)	—	—	—	—	—	—	1207612	401.00	158.29	2186822	243.40	120.76
TAMILNADU												
Pattiveeranpatty	1178	318.00	252.62	1417	166.20	154.50	67842	376.00	160.19	75026	180.10	110.69
Bodinaykanur	—	—	—	—	—	—	4264	178.00	125.20	42343	138.00	95.60
TOTAL (TAMILNADU)	1178	318.00	252.62	1417	166.20	154.50	72106	376.00	158.12	117369	180.10	105.25
KARNATAKA												
Somwarpet	—	—	—	—	—	—	846	227.10	18[illegible].18	478	95.00	83.24
Mercara	—	—	—	—	—	—	69146	300.00	165.48	83566	172.50	108.93
Mangalore	—	—	—	—	—	—	59167	283.00	179.97	101696	160.00	106.08
Saklaspur	3488	348.50	274.64	11151	231.00	151.90	576231	375.00	165.64	597929	244.00	104.40
Sirsi	—	—	—	90	177.89	138.39	23593	317.00	147.80	24251	180.00	100.14
Siddapur	—	—	—	—	—	—	9830	292.00	147.11	5620	156.99	98.83
Kansur	—	—	—	—	—	—	1417	182.29	137.85	—	—	—
TOTAL (KARNATAKA)	3488	348.50	274.64	11241	231.00	151.79	740230	375.00	165.93	813540	244.00	104.90
GRAND TOTAL	4666	348.50	269.08	12658	231.00	152.09	2019948	401.00	161.08	3117731	244.00	116.02

Source : Reports received from licensed Cardamom Auctioneers.

CULTIVATION OPERATIONS

OCTOBER	South-West Monsoon areas (Kerala-Tamilnadu)	North-East Monsoon areas (Tamilnadu)	South-West Monsoon areas (Karnataka)
Primary Nursery	Selection of disease-free and high yielding cardamom plants for collection of seeds.	Watering as required and routine upkeep. Cleaning site for the new primary nursery, digging, removal of roots and stones, collection of jungle soil	When uniform germination is observed remove mulch erect shade pandals. Mulching beds with paddy husk. Routing watering. Spraying mixture of Bordeaux and suitable insecticides as a propoylactic measure. If damping-off disease is noticed, trench beds with Bordeaux mixture 1%
Secondary Nursery	Routine plant protection measures. Watering as required First round manuring if necessary with Ammonium Phosphate followed by mulching.	Routine watering and upkeep. In the new site, formation of beds, spreading jungle soil Construction of shade pandals.	Routine watering, plant ptotection and weeding.
Starting of New Plantations	Second round weeding	First round weeding continued. Clearing footpaths, damage channels and routine upkeep continued	Watch and ward and routine maintenance
Maintenance of plantations	Second round harvest Thrips control. Shade regulation continued Fork digging continued. Forming basins around one year old plants to prevent soil wash Manuring if delayed due to heavy rains.	Second round harvest. Thrips control. Clearing drainage channels and footpaths. Second round weeding.	Watch and ward Crop harvest, curing, storage etc. Manuring and spraying continued and completed

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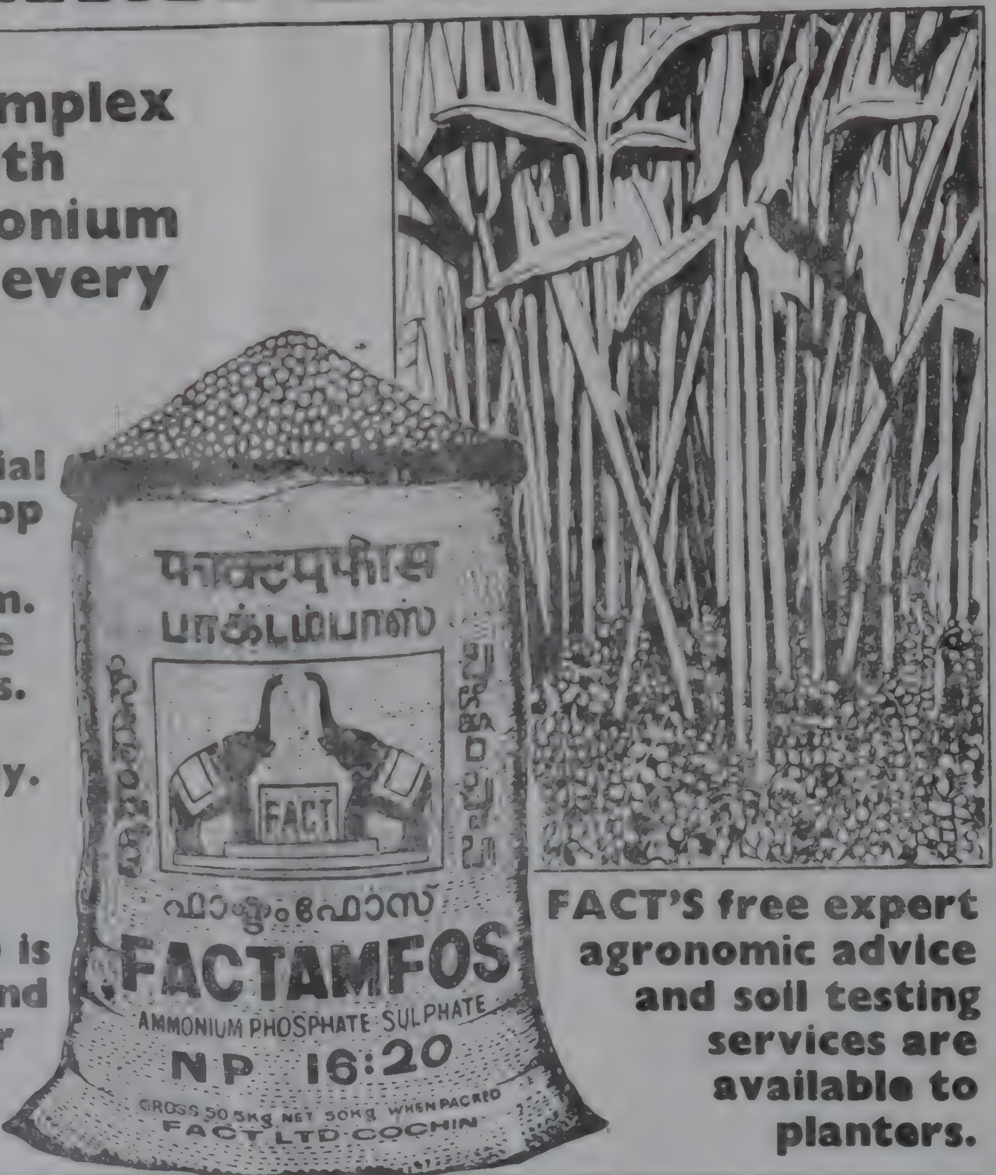

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Nutrition of Cardamom for better yields

Mohan Kumar G.N.[1] and Hegde G. S.[2]

Introduction :

Cardamom *(Elettaria cardamomum* Maton), one of the most ancient spice crops of India, is the uncrowned queen of spices. It is a native of the South Western mountains of the Indian peninsula. Indian Cardamoms are valued high in the foreign markets for their superior taste and excellent aroma. Kerala, Karnataka and Tamilnadu together account for an area of 93,947 hectares* with an annual production of 4500 M.T.* Among spices, it is next only to pepper in foreign exchange earning. India's crop is projected at 6000 M.T. for the year 1985-86. It is estimated that Guatemala's crop at all propabilities would exceed 6000 M.T. The exportable qnantity India will have may be 4000 M.T. against Guatemala's 6000 M.T. (Krishna, 1982). Considering the stiff competition being built up by the entry of Guatemala into the international market, it is essential to step up our productivity. Of the several factors favouring productivity, plant nutrition plays an important role.

The Need for Fertilizer :

The inherent fertility status of soils influence the response to added fertilizers in any crop. Most of the cardamom soils are situated in heavy rainfall areas and therefore suffer from leaching of nutrients (Zachariah, 1975). Cardamom soils tend to acidic (pH 5 to 5.5) due to leaching of bases. The cardamom growing soils of Shimoga, Hassan and Kadur are loamy red containing 50 per cent finer fractions and rich in organic matter (Krishna, 1982). In cardamom growing soils, nitrogen and potassium levels are satisfactory. But level of phosphorous is low (Table-1). Kulkarni *et al.* (1971) have reported that most of the cardamom growing soils are leached red loam soils called oxysols.

Well performing cardamom soils have higher total nitrogen, available phosphorous, potassium, organic carbon, C:N ratio and lime. The influence of available phosphorous, potassium, total nitrogen, calcium and organic carbon and their significant relation (Table-2) with the capsule yield emphsise the importance of these nutrients in the growth and production of cardamoms.

Cardamom soils, in general, are rich in fertility status owing to the presence of shade trees. The shade trees blessed with deep root system, absorb nutrients from the lower horizons and through leaf shedding add it back to surface soil, thus, restoring the fertility status. The shade trees are also valued high because of their regulation of sunlight. It is estimated that on an average 5 to 8 MT. of dry leaves are added by shade trees per hectare of cardamom plantation which is equivalent to 100 to 160 kg. nitrogen, 5 to 8 kg. phosphorous, 100 to 160 kg. potassium, 10 to 16 kg. calcium and 25 to 40 kg. magnesium. This may not be true in all gardens. This mainly depends upon the nature and number of shade trees present. Owing to the indiscriminate felling of shade trees, the quantity of nutrients added back has also reduced in many gardens.

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*Cardamom Statistics 1979-80

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  (2) Proceedings of the First Annual Symposium on Plantation Crops, Kottayam (India), March, 1978. Agronomy, Soils, Physiology and Economics of Plantation Crops. 540 pp. Rs. 75 (US $ 25)

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The uptake of nutrients by cardamom plants is quite high. It needs higher quantities of potassium for its growth. (Kulkarni *et al.*, 1971). One hectare of cardamom removes 25.97 kg. nitrogen, 4.35 kg. phosphorous, 52.11 kg. potassium, 13.96 kg. lime and 3.48 kg. magnesium (Table-4 & 5). Every crop of cardamom depletes the nutrients in the soil. Therefore, there is need for applyiug fertilizers.

In a nutshell, the need for fertilizers in cardamoms be explained as follows:

(a) Cardamom soils are situated in high rainfall areas and therefore are subject to leaching of nutrients and bases.

(b) Leaching of bases (calcium) reduces soil pH when phosphorous availability is brought down.

(c) Indiscriminate felling of shade trees has reduced the availability of leaf mulch which otherwise would have contributed to soil fertility.

(d) Every crop of cardamom depletes the nutrients from the soil which necessitates the application of nutrients for restoring soil fertility.

(e) Lack of nutrients affect the vigour of the plant and thereby its productivity.

Characterization of Mineral Deficiencies and Measures of Correction :

Kulkarni *et al.* (1971) have reported the symptoms caused due to the deficiency of nutrients in cardamom. The deficiency symptoms of nitrogen, phosphorous, potassium and magnesium are confined to older leaves while the younger leaves depict the symptoms due to the lack of calcium.

Nitrogen :

Nitrogen is a component of amino acids, proteins, co-enzymes, nucleic acids and chlorophyll. Nitrogen deficiency results in the loss of chlorophyll in leaves due to which leaves look pale yellow. The leaves become small in size and the shoot growth is drastically reduced. The leaf turns brown at the tip, changes to greenish yellow at the middle, while the leaf base remains green. The tillers are also reduced. The growth of stem and leaves need nitrogen. The requirement of nitrogen is next only to potassium (Table-4 & 5).

Phosphorous :

Phosphorous is a component of nucleotides, nucleic acids phospholipids and coenzymes. Phosphorous deficiency destroys membrane permeablity. It is also required for the production of ATP (Adenosine-tri phosphate) without which plants do not get energy.

The cardamom plants need phosphorous in small amounts and seldom show symptoms of deficiency. However, the plants affected with lack of phosphorous show poor root growth. The roots will be many but short. The tillers produced will be a few. At later stages, there will be inward curling and drying of the tips of leaves. The plants need phosphorous throughout the growth period.

The relation of phosphorous with pH of the soil has to be given due consideration. In acidic soils (pH below 7) the soluble iron and aluminium ions combine with phosphate ions to form iron and aluminium phosphate. This makes phosphorus unavailable for plants. Liming can correct soil reaction and thus enhance availability of phosphorous.

Potassium :

Plants deficient in potassium show browning of leaf tips which extends downwards later. The whole leaf later turns dark brown. The requirement of potassium is high when compared to other nutrients. Nearly 52 kg. of potassium is removed from one hectare (Table-5), which is 12 times higher than phosphorous. It could be seen from the Table-3 that the panicles, husk and seeds contain 3.45, 4.28 and 3.72 per cent potassium elucidating the requirement of higher amounts of potassium at this stage. If the potassium is not made available at this stage, the plants may suffer from the deficiency resulting in lower yields.

In plants, potassium is not a component of any compounds. But it is known to activate several enzymes involved in metabolism. It is also involved in stomatal regulation and can give drought tolerance to plants.

Calcium :

Calcium is a component of cell wall of plants and lack of it results in the poor restricted growth It is required for the cell division and in its absence the root and shoot growth are restricted. Due to this deficiency, the stems of the plants project a bulb like appearance.

The leaf margin turns brown with a golden yellow band underneath. The leaves also have golden yellow spots. Affected plants finally wilt. The demand for calcium increases during the development of capsules. The husk of the capsules contain as high as 1.27 per cent of calcium (Table-3).

Since cardamom soils are subjected to leaching of calcium, it is necessary to apply lime to soil to meet the requirement of calcium. This also favours availability of nutrients by correcting soil pH. When pH is 5.0, application of 5000–7000 kg. lime can increase the pH to 6.0. During planting 1 kg. of lime can be mixed per pit to a depth of 30 cm. However, Cardamom Board recommends addition of 100 g. rock phosphate per pit. During the next two years liming at 1000 kg. per hectare should be done in between plants. Instead of lime dolomite ($CaCO_3+MgCO_3$) can be applied at 1500 kg per hectare, Dolomite is desirable to lime as it can also supply magnesium. Rock phosphate can be used at 500 kg per hectare as a substitute for lime and dolomite (Shanmugha Velu and Madhava Rao, 1977).

Table–1

NUTRIENT STATUS OF CARDAMOM SOILS IN COORG AREA

Constituents	0-22 cm depth % on oven dry weight basis	 Mean % on oven dry weight basis	22-44 cm depth % on oven dry weight basis	 Mean% on dry weight basis
Total Nitrogen	0.1610-0.2618	0.2130	0.0378- 0.2492	0.1788
Available P_2O_5	0.0010-0.0012	0.0006	0. 001- 0.0023	0.0024
Available K_2O	0.0070-0 0332	0.0146	0.0055- 0.0277	0.0121
Total Ca	0.0710-0.3510	0.1690	0.069- 0.347	0.147
Organic Carbon	1.26- 3.96	2.63	0.36- 3.36	1.94
C/N ratio	7.10- 18.50	12.26	7.70- 15.30	10.08
PH	6.02- 7.04	6.07	6.00- 7.03	6.69
No.of tillers/ clump	17.23	24.0	—	—
Capsules (grams)	400-2867	1288	—	—

Table-2

RELATIONSHIP STUDIES

Dependent variable	Available P^2O^5	Available K^2O	Total CaO	PH	Tillers	Organic Carbon	C/N ratio
Tillers	0.703**	0.767**	NS	0.581*	—	NS	NS
Capsules	0.586**	0.654**	0.657**	NS	0.719*	0.553*	NS

**Significant at 0.1%

*Significant at 0.5%

NT—Not Significant

Magnesium

Magnesium is a component of the chlorophyll molecule and thus involved directly in photosynthesis. It also activates several enzymes involved in respiration and has a role in protein synthesis. Lack of magnesium causes loss of chlorophyll in between veins (interveinal Chlorosis) of older leaves. The affected cardamom plants produce only a few tillers. The plants depict a broom like appearance due to reduced internodal length. The top leaves get twisted and tips dry up. The whole leaf becomes pale yellow in between veins and papery white spots appear on the lamina. This symptom is quite common in the nursery. Application of Dolomite to correct the soil acidity can also supply magnesium to plants.

Manuring and Fertilization

a) Nurseries

It is essential to incorporate rock phosphate at 600g, Sulphate of potash (K_2SO_4) at 120 g. each per bed of 1 m x 6 m. If eelworm and crab infestation is noticed, neemcake at 600g per bed should be applied. Once in two weeks the plants have to be supplied with ammonium sulphate (454 g/ 50 litres water) K_2SO_4 (454 g/ 45 litres water) and once in a month CAN (900 g/45 litres water) should be supplied. Upto 6 months period, the seedlings should be fed with 50g mixture of calcium, ammonium, nitrate (CAN) and muriate of potash (mixed at the ratio of 1:2) should be applied. This should be repeated after 1–2 months. This can supply nitrogen and potash at 30 kg and 60 kg per hectare respectively.

The cardamom board recommends application of green manure and wood ash in the nursery beds. In the second nursery nitrogen at 120 g, P_2O_6 at 20 g, 300g K_2O magnesium sulphate at 50g and lime at 70 g should be applied for every 100 plants.

b) *Field crop*

In view of the need for high organic matter, heavy application of organic matter coupled with inorganic fertilizers is essential. As early as 1944, Yogna Narayana Aiyer recommended application of 600 kg of a mixture containing 152 kg castor cake, 51 kg bone meal and 51 kg potassium chloride (Purseglove *et al.*, 1981). Shanmughavelu and Madhava Rao (1977) have recommended application of well rotton cattle or sheep manure during June-July and September-October. The organic manure are to be applied at 3-4 tons per hectare. Application of fertilizers in two doses- once in January-March (10 g N/plant) and once in May–June (25:30:30 of NPK/plant) is recommended by Regional Research Station, Mudigere. The requirement of NPK varies with soil,

Table–3

CHEMICAL COMPOSITION OF CARDAMOM PLANT AT DIFFERENT STAGES OF GROWTH

Percentage on air dry samples

Stage of Growth	N	P	K	Ca	Mg
I Leaves					
Young green	2.45	0.23	2.46	0.45	0.09
Mature green	2.52	0.37	2.10	0.50	0.05
Bearing green	1.85	0.10	2.04	1.08	0.12
Bearing (old dried)	1.33	0.03	0.48	1.64	0.22
II Pseudostem					
Young	0.68	0.46	3.96	0.18	0.06
Mature	0.63	0.23	2.70	0.25	0.11
Bearing	0 63	0.10	1.20	0.58	0.13
III Panicle	0.37	0.09	3.45	0.58	0.04
IV Husk	0.85	0.09	4.28	1.27	0.08
V Seed	1.44	0.38	3.72	0.07	0.05
VI Rhizome	0.40	0.06	1.68	0.38	0.08
VII Roots	0.70	0.16	1.74	0.35	0.05

Table–4

UPTAKE OF NUTRIENTS (Kg/ha) BY CARDAMOM PLANTS AT DIFFERENT STAGES OF GROWTH

Plant part	N	P	K	Ca	Mg
I Young Suckers					
Pseudostem	0. 37	0. 25	2. 15	0. 10	0. 04
Leaves (Green)	0. 70	0. 07	0. 70	0. 13	0. 03
Total	1. 07	0. 32	2. 85	0. 23	0. 07
II Mature Suckers					
Pseudostem	2. 96	1. 08	12. 69	1 20	0. 51
Leaves (Green)	6. 31	0. 93	5. 28	1. 25	0. 13
Total	9. 27	2. 01	17 97	2. 45	0. 64
III Bearing Suckers					
Pseudostem	4. 50	0. 73	8. 56	4. 11	0. 93
Leaves (Green)	5. 54	0. 31	6. 11	3. 23	0. 04
Leaves (old dried)	0. 75	0. 02	0. 28	0. 95	1. 28
Panicle	0. 10	0. 03	1. 22	0. 16	0. 01
Husk	0. 23	0. 03	1. 13	0. 34	0. 02
Seed	1. 05	0. 28	2. 71	0. 05	0. 04
Total	12. 17	1. 40	20. 01	8. 24	2. 32
Nutrient removed per kg of capsules harvested	0.122	0.014	0.200	0.088	0.023

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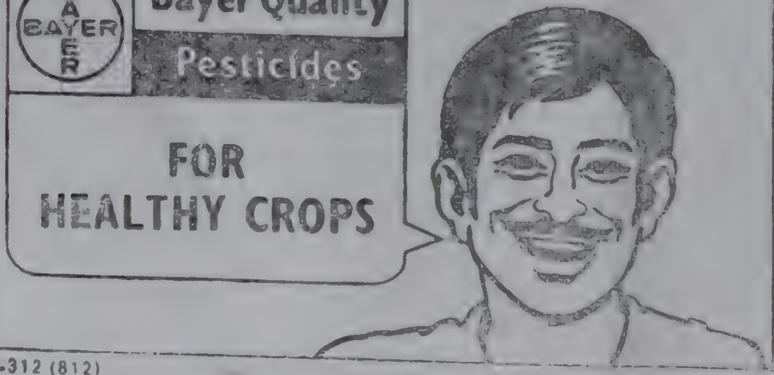

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Table-5

UPTAKE OF NUTRIENTS (Kg/ha)

Plant Part	N	P	K	Ca	Mg
Young suckers	1.07	0.32	2.85	0.23	0.07
Mature suckers	9.27	2.01	17.97	2.45	0.64
Bearing suckers	12.17	1.40	20.01	8.84	2.32
Rhizome	1.54	0 24	6.50	1.49	0.31
Roots	1.92	0.38	4 78	0.95	0.14
Total	25.97	4.35	52.11	13.96	3.48
Ratio	6	1	12	3	0.8

Table-6

FERTILIZER RECOMMENDATIONS FOR CARDAMOM ESTATES SITUATED IN 3 DIFFERENT CARDAMOM GROWING STATES

	Kg/ha	Urea	Amm. Sulphate
Nitrogen			
Kerala	45	98	212
Karnataka	67*	73	157
Tamil Nadu	45	98	212
Phosphorous		**Superphosphate**	
Kerala	45	281	
Karnataka	34	212	
Tamil Nadu	34	212	
Potassium		**Muriate of Potash**	
Kerala	45	75	
Karnataka	100	167	
Tamil Nadu	45	75	

*50% as organic manure

climate and variety. Geus (1973) has given the recommendations for Kerala, Karnataka and Tamil Nadu (Table-6).

The fertilizers should not be applied too deep into the soils. The cardamom plants have a shallow root system and nutrients available at lower depths have no bearing on yield. This is clear from the work of Srivasthava and Bopaiae (1973). Soil application of nutrients is reported to be superior to foliar application. Uptake of calcium and magnesium is also known to increase with NPK application (Venkatesh, 1982).

References:

Deshpande, R. S., Kulkarni, D S., Suryanarayana Reddy, B. G. and Kulkarni, S.V., 1973, Deficiency symptoms in cardamom *(Elettaria cardamomum). Mysore J. Agric. Sci.*, 7 (2): 246-249

Geus, J. G. de 1973, *Fertiliser guide for the tropics and subtropics.* 2nd edition. Zurich Centre d'Etude dell A_{30} te.

Krishana, K. V. S., 1982. *Improving cardamom production.* United Planters Assoc. South India pp. 11.

Kulkarni, D. S., Kulkarni, S. V., Suryanarayana Reddy, B. G. and Pattanasetty, H. V., 1971, Nutrient uptake by cardamom. *Proc. Int. Symp. Soil. Fert. Evaluation* New Delhi. Vol. 1. 293-296.

Purseglove. J. W., Brown, E. G., Green, C. L. and Robbins. S. R. J., 1981, *Spices, Vol. 2,* 581-643.

Salisbury, B. Frank, Cleon Ross, 1974, *Plant Physiology.* 204 Shanmughavellu, K. G. and Madhava Rao, 1977, *Spice and Plantation crops* 48-70.

Srivasthava, K.C. and Bopaiah M.G. 1973, Soil nutrient content and its relationship to yield and tillering of cardamom in Coorg. *South Indian Hort.*, 21 (4) : 115-118.

Venkatesh J. 1982, Comparison of the efficacy of soil application v/s soil cum foliar application of NPK nutrients on proliferation of suckers in cardamom. *Thesis Abstr.*, (1982) 8(1):53-54. Univ. Agril. Sci, Bangalore.

Zachariah P.K. 1975, The fertility status of cardamom growing soils. *Cardamom News*, 7 (3):5-8.

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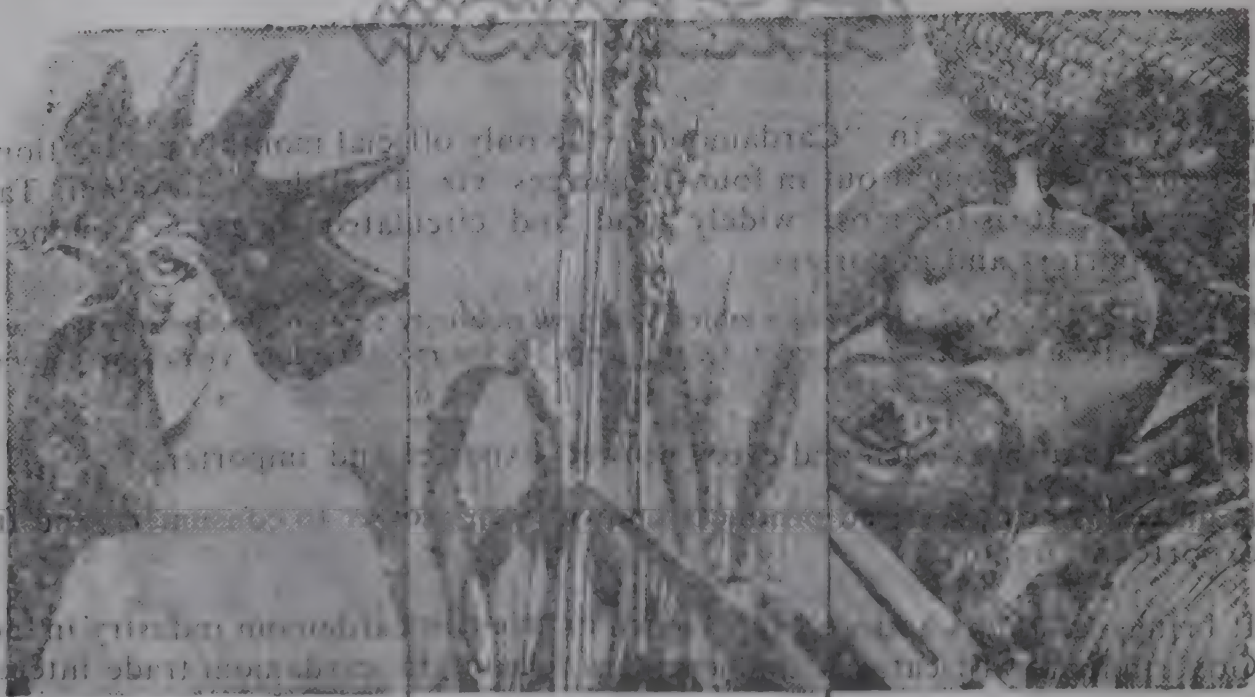
Secretary,
CARDAMOM BOARD
Cochin-682 018.
Phone : 33837
Telex : 0885-460 ELAM
Gram : CARDAMOM



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But now Cythion can give your livestock and poultry a fighting chance to live healthy pest-free lives.
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A low hazard, powerful insecticide Cythion kills on contact. Prevents untold damage.
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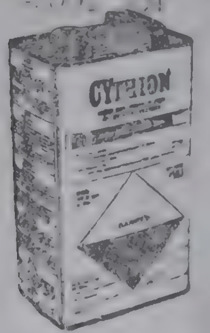

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CIL-174

Trade Exports

Expeditious Settlement of Claims - Procedure at Bombay

Public Notice No. 98 dt. 9-5-83.
Bombay Customs

With a view to expedite settlement of the drawback claims made under section 74 and 75 of the Customs Act 1962, the following revised procedure will be introduced in the Customs House with effect from the 15th May, 1983.

Every exporter who exports goods under claim for drawback shall submit an extra copy of the shipping bill clearly superscribed 'Drawback claim copy.' The drawback claim copy of the Shipping Bill (D.B.C.) will contain the following declarations of the exporter on the reverse:

(i) We claim drawback under section 74/75 of the Customs Act, 1962 read with Rule 11 of the Customs and Central Excise Duties Export Drawback (Central) Rules, 1971. It is hereby declared that in respect of the following goods covered by this shipping bill, claim for drawback is being made.

Description of the goods:

Serial number of the drawback schedule:

Rate at which drawback is claimed: Total amount of drawback claimed: Name of the Bank. and

Account number to which the drawback amount may be sent:

OR

(ii) Our claim is provisional one as we have applied to the Directorate of Drawback for fixation of brand rate

OR

We propose to apply to the Directorate of Drawback for fixation of brand rate.

(iii) I/We declare that the entire cargo covered by this shipping bill has been loaded on board the vessel............and exported and that no part of it has been unloaded/off loaded or shut out at the port of export.

OR

I/We declare that in case any part of the goods declared are shut out/short shipped/offloaded, the fact will be intimated to the drawback department immediately on the same day.

OR

I/We declare that the following packages have been shut out/off loaded or unloaded and were not exported:

1. No. of packages:
2. Marks and numbers of such packages:
3. Description and quantity of goods in each package:
4. Proportionate F. O. B value of the goods not exported:
5. Proportionate amount of drawback involved: (Strike out whichever is not necessary)

Signature of the Exporter
or his authorised Agent.

The front side of the D.B.C. will be the same as that of the other copies of the shipping bill. The exporter or his agent will also give a stamped pre-receipt on the D.B.C. on the reverse.

All the copies of the shipping bill including the D.B.C. will be presented to the scrutinizing Appraiser in the Export Department by the Exporter/C.H.A. The scrutinizing Appraiser/Examiner will complete the D.B.C. in the same way as the original. The examination order will also be endorsed on this copy. Thereafter all the copies of the shipping bill will be presented to the Drawback Scrutiny Unit (D. S. U) in the Export Department. The Appraiser/Examiner in this unit will scrutinize the claim on the basis of the copies produced. If any amplification or clarification regarding the description, composition or any other material particular is required by the Appraiser in D.S.U. the same will be obtained at this stage. If the claim is found to be correct an endorsement will be made to that effect and the same entered in the tally sheet by the Clerk and a number assigned to D.B.C. which will be called the Drawback Number.

Thereafter the original shipping bill and the original G.R.1. form will be retained in the Export Department in the usual manner and other copies including the D.B.C. will be given to the exporter for arranging examination of the goods and shipment.

In order to avoid last minute rush, exporters are advised to present the shipping bills along with the D. B. C. *at least 7 days in advance of the arrival of the vessel.* The date of arrival can be ascertained from the Shipping Company/Steamer Agent or the Publication 'Shipping Times'. With regard to containerised cargo this procedure will enable them to complete the documentation formalities long before the arrival of the vessel facilitating the examination and stuffing of the cargo.

The exporter or his agent will present the duplicate and the drawback copies in the usual manner to the Shed Appraiser/Examiner for examination of cargo. The examination report will be endorsed on the duplicate as well as the D.B C. The out of charge will be signed on both the copies. The examining Appraiser/Examiner will retain the D. B. C. for being forwarded to the Drawback Section for processing of the claim and payment of the drawback amount. If the exporter or his agent desires to have a receipt, the examining A.C./E.O. will give the same on the exporter's copy of the shipping bill.

In order to expedite payment of the drawback amount, it has been decided *to discontinue* the issue of Drawback Payment Order. Instead as soon as the D.B.C. copy is received, the claim will be processed and when in order passed for payment. If the claim made is not admissible or if the drawback amount due is different from the amount claimed by the exporters, they will be intimated of that position through letter. Where the claim is passed for payment, the drawback amount due will be straightway credited to the account of the exporter. The State Bank of India, (Bombay main branch) has been nominated for this purpose and all exporters who claim drawback on their exports are required to open an account with the said branch and indicate the account No. on the reverse of the D.B C.

If the exporters find that the amount due has not been made *within a week of their* shipment, they may approach the enquiry officer in the Drawback department. Such enquiry will be made on enquiry slips available with the officer. The correct position will be cheked up by the enquiry office and exporters will be informed of the same within *3 days* thereafter. If the Exporters fail to get the necessary information or are not satisfied with the information furnished they may personally or through a letter, take up the matter with the Asstt. Collector/Dy. Collector incharge. □

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Telex: POSH-CN-452
Phone: 5742; 5743; & 5744; Cochin

TRAVANCORE CHEMICAL & MANUFACTURING CO. LTD.,
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Manufacturers of :

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FERTILISERS AND PESTISIDES

V. P. SINGH and S.P. SINGH
Hariyana Agril. University, Hissar

Considerable amount of money is being spent today by the farmers for pesticides and fertilizers. Also it has been found that all pests and diseases cannot be controlled with one particular pesticide and hence different pesticides have to be used for different pests and diseases. Added to this, the ever increasing cost of fertilizers has made scientists think of various techniques for reducing the quantity of fertilizer applied without sacrificing the efficiency.

Foliar application has been found to be one of the possibilities. In area of acute water scarcity fertilizers and pesticides could be mixed and applied in one single spray. Hence attempts have been made to study their compatibility.

As the pesticides are either organic or inorganic chemicals, they tend to react among themselves as well as with other agro-chemicals. This will result in either the pesticide loosing its pesticidal activity or becoming phytotoxic or adversely affecting the spraying equipment like clogging the nozzle.

Hence, the compatibility of the pesticides with other agro-chemicals have to be studied with reference to their physical compatibility, chemical compatibility and phytotoxicity. Most of the pesticidal formulations are emulsion concentrates and they contain not only the active ingredient but also other material like emulsifiers, stabilizers and wetting agents. So the incompatibility could be due to incompatibility of not only of the active ingredient with fertilizers but also of other materials with the fertilizers.

Physical Compatibility

It can be tested by the emulsion stability test wherein a known quantity of the formulation is taken in a measuring cylinder and the required quantity of water is added and shaken for specified number of times and allowed to stand for a predetermined period. In case of seperation of the phases, then the two components are considered to be incompatible.

Chemical Compatibility

It can be tested by the development of acidity/alkalinity, absence of loss of active ingredient as well as the nutrient in the fertilizer.

Phytotoxicity

It can be tested by spraying the mixture on the test plants under varying conditions and studying the presence or absence of the phytotoxic symptoms.

A number of studies made on the compatibility of pesticides with fertilizers have shown the following results.

Most of the insecticides (Parathion, Carbaryl and Diazinon, etc.) were found compatible with urea solution.

The efficiency of Phorate in the control of sorghum shootfly was found to be greatest when combined with ammonium-sulphate than when it was applied alone.

The toxicity of Parathion, Fenitrothion, Methly Parathion, Methyl Demeton and the Thiometon did not reduce due to mixing with urea.

The foliar application of a mixture of urea and phosphomidon, Fenitrothion and Lindane was found to be much more effective in controlling paddy stem borer and gall midge than when the insecticides were applied alone.

Most of the fertilizers mixed with Heptachlor, Chlordane, Aldrin and DDT at 30°C had good stability for a month.

In mixing of pesticides with urea, various pesticides like Thiram, phosphamidon, Dithane M-45, Thiometon, Endosulfan, Parathion, Fenthion, Carboryl and Methyl Parathion plus DDT, neutral or acidic fertilizers with Captan, superphosphate with Methyl Mercaptophos, Lindane or Aldrin, Ammonium phosphate with Rogor were found compatible and they did not affect the efficacy of the pesticide or fertilizer.

Certain combinations like urea with lime sulphur, Carbaryl or Morocide, and NP fertilizers with Rogor were reported to have produced phytotoxic symptoms or reduced either the pesticidal activity or the fertilizer content.

Other problems with regard to the incompatibility could be overcome by adopting modifications like reducing the concentration of one or both of the compounds, changing the order of mixing, reducing the period of the storage, increasing volume of spray solution over the same area and spraying in the cool hours of the day.

Fairs and Exhibitions

Board Participates in UPASI Exhibition

Cardamom Board participated in the UPASI Industrial exhibition held at Coonoor from September 22–25, 1983. The 3-day fair was inaugurated by Shri. Appaya Chairman of UPASI, who also declared open the Board's pavilion.

The spacious stall of the Cardamom Board, attracted a large number of visitors and different commercial grades of Cardamom and end-products of Cardamom like Cardamom toffees, Cardamom flavoured biscuits, Medicinal preparations etc. were displayed attractively. The model of the Cardamom plant and the grades of cardamom filled in glass flasks and fixed circularly on a board against a colourful background were centre of attraction to the visitors. The highly informative charts, photographs depicting the various facets of the Indian Cardamom plantation industry were of great interest to the visitors. The recently launched Cardamom Board's replantation Loan-Cum-Subsidy scheme and intensive cultivation Loan-Cum-Subsidy schemes were also kept distinctly with descriptive charts and our representatives at the stall explained its benefits to the visitors. The plantation welfare schemes of the cardamom Board designed to rejuvenate the drought-hit cardamom plantation were also highlighted to the visitors.

Meanwhile, the visitors highly appreciated our stall and profusely recorded their appreciation on the beautiful display of our exhibits and the good representations made. The free publications of the board on various aspects of Cardamom cultivation along with many other pamphlets, leaflets and brochures were distributed to the visitors. Cardamom flavoured coffee was also served to the visitors and the delegates. Cardamom at subsidised rate was also sold at our stall.

Among the dignitaries who visited our stall includes Mr. V. P. Singh, Union Minister of Commerce, Mr. C. Ponnaian Minister for Co-operation and Law for Tamilnadu and Chairman Tea Board.

Cardamom Board in Lal Bagh Exhibition

Cardamom Board has taken part in the week-long horticultural show at Lal Bagh, Bangalore held from August 9th to 15th. The 7-day exhibition was inaugurated by Shri Vishwanath Reddy Mudnal Minister for Horticulture, Govt of Karnataka.

Informative photographs, charts and models depicting different facets of cardamom and cardamom culture were displayed, besides different grades of cardamom and cardamom flavoured products like nutrine chocolate, true biscuits etc. A model of the cardamom plant was also an added attraction to the visitors. Literature on cardamom and cardamom culture were distributed.

Morethan 1½ lakh people visited the board's stall during the period of the exhibition. The board has been awarded a silver cup for the best display in the fair.

ADVERTISEMENT TARIFF

	All editions One year	All Editions Single Insertion
Back Cover (double colour)	Rs. 9,600	Rs. 800
Inside cover	Rs. 7,200	Rs. 600
Inner full page	Rs. 6,000	Rs. 500
Inner half page	Rs. 3,600	Rs. 300
Inner quarter page	Rs. 2,400	Rs. 200

News Shorts

Cardamom Growers Meeting at Kalimpong

A meeting of the Cardamom Growers at Darjeeling district was held at Kalimpong Chamber of Commerce Hall, Kalimpong recently. About 60 planters from various parts of the district attended the meeting and actively participated in the deliberations.

Shri. R. Chandrasekhar, Assistant Director, Cardamom Board, Kalimpong welcomed the gathering, and Shri. T.D. John, Deputy Director, Cardamom Board, Tadong, presided over the meeting. In his presiding address he gave a detailed account of the activities of the Board for Large Cardamom in West Bengal and Sikkim.

In the discussion that ensued, the planters actively participated and put forth various problems faced by them, for which the concerned Officers responded. Leaf–lets in vernacular language on mulching and curing were distributed among the growers and a model curing house was exhibited and the working of it was explained. A sample of cured Cardamom produced by this process was also shown to the growers.

Mr. K.W. Sherpa, Project Officer, District Rural Development Agency, Darjeeling; Mr. L.S. Bishwakarma, District Agriculture Marketting Officer, Darjeeling; Mr. N.K. Chakraborty, Officer-in–Charge, I.A.R.I. Kalimpong; Mr. Shanti Kumar Sharma, Officer, District Central Co-operative Bank, Kalimpong; Mr. N.G. Yelmo, Chairman, Takdah Panchayat Council, Takdah; also spoke on the occasion, and Shri Bijoy Kumar Sundas, Extension Assistant, Kalimpong, proposed vote of thanks.

Companies can Participate in External Tenders in Syria

The Arab Advertising Organisation, P. B. No.3034, Damascus (Syria), Telex No. 411923 will shortly be introducing an immediate service programme under which foreign companies or organisations willing to participate in the external tenders floated by the Government of the Syrian Arab Republic could be provided with detailed information in respect of those tenders within two or three days. Those interested may contact the Arab Advertising Organisation for further details.

New Visa rules for Businessmen in UAE

Foreign investors and holders of commercial licences will not be given entry visas into the UAE unless they produce proof of partnerships with local nationals according to new regulations. Companies bringing expatriats employees into the UAE must submit a bank guarantee equalling the cost of a ticket from the UAE to the employee's home country.

New Telephone Number for Madras Liaison Office

The new telephone number of our Madras Liaison Office is 416860.

UAE Limits Foreign Business Participation

Foreginers may now only participate up to 49 per cent in private unlimited companies Law in the UAE. Private unlimited companies are defined as partnerships in which the profits and losses are shared. The draft also envisages a new category- a private joint stock company with a mandatory minimum capital of Dh.2 million, with at least five founders who will subscribe for the whole capital. Its shares will be non-negotiable and it must operate in the same manner as a joint stock company.

Kuwait Brings in new Regulations

Regulations on labelling imported foods have been agreed by the Municipality and the commerce, and industry and public health ministries. The manufacturer must specify the date of manufacture, expiry date, contents and commercial date.

New Instructions issued to Traders In IRAQ

Import companies in the private, public and mixed sectors have been instructed to request foreign suppliers to separate product costs from transport costs when submitting bids, according to the April issue of the Baghad Chamber of Commerce's monthly Commercial Bulletin.

New controls imposed on Agents

Public employees who act as agents for foreign companies seeking business with state organisations, or who receive payment for advance notification of tenders, are liable to execution or life imprisonment, according to a new law passed by the Revolution Command Council in Iraq.

Priority Telephone for Foreign Exchange Earners

Foreign Exchange earners are eligible to register applications for telephone connection under OYT/Special category. Manufacturers of exportable goods, individuals, firms and organisations earning foreign exchange by way of services rendered and export houses earning foreign exchange by export of commodities, are covered under this category.

Applicants earning foreign exchange of more than Rs.2 lakhs and up to Rs. 5 lakhs in a year can register for one telephone connection in OYT/Special Category. For earnings of above Rs 5 lakhs for two consecutive years, additional applications for 2 to 5 telephones can be registered depending on the actual quantum of foreign exchange earned.

Non-resident indians and foreign nationals of Indian origin on repatriating to India and surrendering foreign exchange equivalent of US $2000 to the Reserve Bank or to any authorised nationalised bank, can register for one telephone under OYT/Special category.

For further details, contact the FIEO, 'PHD House', Siri Institutional Area, Hauzkhas, New Delhi-110016.

R.B.I. Renames its Credit Department

The Industrial Credit Department of the Reserve Bank has been renamed as the Industrial and Export Credit Department. Besides handling the work connected with the credit authorisation scheme, sick industrial units and liaison and operational work connected with institutional finance, the Department also deals with the various aspects of export finance and administers the export credit interest subsidy and duty drawback credit schemes.

India Ranked among the top Manufacturing Countries

The U.S. Department of Commerce ranked India among "the top 10 manufacturing countries in the world" according to a report from washington.

At present, the industry provides about 1/4th of India's Gross National Product and manufactured products account for some 80 per cent of India's exports. A dominant part of the economy is constituted of Agriculture, as per the special report published in the recent issue of the Business America.

Luxury Cruiser between UAE & Bombay

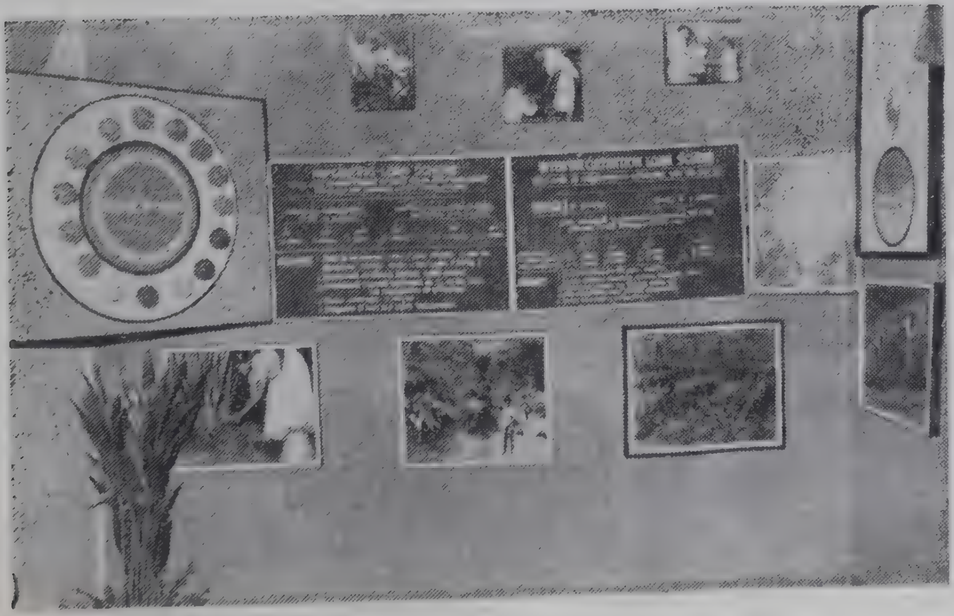
A regular passenger shipping service between the UAE and the subcontinent will begin shortly under the flag of Khalid Maritime a public limited company being set up in Sharjah. The fully air conditioned luxury cruiser will take three days to Bombay and two to Karachi and will offer three classes of service-first, economy and pullman, popularly known as deck. The fares which are being worked out will be in the range of Dh.2000 in first class. Dh. 1000 in economy and Dh. 750 in deck for Bombay. The ship can carry 1,900 passengers. It has all modern amenities with a duty free ship The free luggage limit would be 100 kilogrammes.

(Continued on Page 21)

PHOTO FEATURE

Shri M. B. Appaya, President, UPASI inaugurating the Board's pavilion at the UPASI Exhibition, Coonoor.

Shri C. Ponnaiyan, (second from right) Minister for Co-operation and Law, Tamilnadu along with the Board's representatives, Shri S.K Sivagnanam (first from left) and Shri S. Thangavelu (second from left) at the Board's pavilion in the UPASI Exhibition. Coonoor.



An inside view of the Board's pavilion at the UPASI Exhibition Coonoor.

A front view of the Board's pavilion at the UPASI Exhibition, at Coonoor.

A front view of the Cardamom Board's pavilion at the Lalbagh Horticultural Show held at Bangalore recently.

Shri Viswanatha Reddy Mudnal, Minister for Horticulture, Government of Karnataka during his visit at the Board's pavilion in the Lalbagh Horticultural Show held at Bangalore.

Shri K. Wangdi Sherpa, Project Officer, District Rural Development Agency, Darjeeling, speaking on the occasion of the meeting of the Cardamom Growers held at Kalimpong. On his right are Shri T. D. John, Deputy Director, Cardamom Board, Tadong, and Shri R. Chandrasekhar, Assistant Director, Cardamom Board, Kalimpong.

A view of the audience who participated in the Cardamom Growers' meeting held at Kalimpong.

(Continued from Page 18)

New Telegraph Transmission Method

The Posts and Telegraphs Department has introduced a unique method to transmit telegraps.

The method, called facsimile works on the principle of photo transmission and is available between Bombay and New Delhi. It will soon be extended to Madras and Culcutta, according to official sources.

Under the service, messages can be transmitted more accurately than through telex.

Made by Electronics Corporation of India Limited (ECIL), the equipment is being used for transmission and reception.

The sources said the transmission charges were according to the length of the message. The minimum charge was Rs. 50/- for 335 sq. cm.

The Central Telegraph Office at Delhi would soon have computerised storage and forward service (SFC) to help eliminate delays in the operation.

Tapes received on teleprinters would be fed through the computer supplied by ECIL, which would automatically store the message if the particular channel was not clear.

Industry Snippets

Numbering Machines

Numerators India has manufactured the special numbering machines for offices, business houses, and industrial organisations: 1) self inking metal dater. 2) price stamping machine. 3) batch lot numbering machine. 4) weight stamping machine. 5) mfg./exp. marking machine and 6) date-cum-numbering machine

The machines are sturdy in construction with metal body and wheels made of specially selected alloy. They are of the self inking type and available in Gothic face figure size 3mm/4.5 mm. They work fast and give clear and distinct impressions. Date-cum-numbering machine, a very useful equipment for dating and numbering of incoming mails simulteneously, has date unit in figure size 4.5 mm in Gothic face and number unit consisting of 4/5 wheels capable of printing numbers up to 9999/99999 in 5.5 mm in Roman face. It occupies only 42 mm printing space and its weight is only about 350 gm.

Details from:

Numerators India,
2/5, Marris Road,
Mendu Compound,
Aligarh - 202021 (U.P)

Automatic Packer for Powdered Material

High speed automatic valve packers for ground rock and powdered materials has been developed. The robust machines are designed for continuous use in packing of cement, gypsum, lime, china clay, hydrated lime, crushed rock and other fine powders. A special contra-flighted, screw fed impeller ensures material compaction; and filling, weighing is ± 250 g on 50 kg. A choice of 1,2,3, or 4 spouts, with a maximum capacity of 70 tonnes per hour is available. The machines need only one operator, to place the empty sack on the filling spout and start the machine. For higher output machines, cycle initiation switches operated by the empty sack can be fitted.

More from : *Reed Medway Packaging Co. of India Pvt. Ltd., D-4. Batra House, Paschimi Marg, Vasant Vihar, New Delhi-110 057*

Steam Injection Liquid Heater

An efficient steam injection liquid heating system has been newly introduced. Named Dashi heater, it is used to heat water or any other liquid by direct injection of steam into it, in a mixing chamber specially designed to give a thermal efficiency of 100%, and also to eliminate water hammer. Automatic temperature control is possible within 3°F. The system is compact, needs virtually no servicing, and can cut fuel costs. The heater can be used for constant flow or variable systems wherever a heat exchanger is required. It is much more efficient than the conventional heat exchanger and more economical in fuel use. Areas of application are reactor vessels, retorts, jacketted kettles, extruders, in-line cooking, sterlization, lime slaking, continuous spraying, tank car washing and heating, shower rooms, accumulator tanks and other flow applications.

More from: B.M. Singh & Son, A-11, 18th floor, Chatterjee International Centre, 33A, ChowringheeRoad, Calcutta - 700 071.

Escape Hood

The Auer S-cap escape hood manufactured by Auergesellschaft GmbH, West Germany, is a respirator for rescue from smoke-filled rooms in burning buildings. In an emergency, it provides protection from poisoning by gases and fumes. Its special design permits unencumbered donning. The S-cap is simply pulled over the head, fixed with a harness, and one can breathe freely with least resistance. Its special combination filter clears the inhaled air from toxic smoke and gases like carbon monoxide chlorine, hydrogen cyanide, sulphur dioxide and also toxic gases which are produced due to the burning of plastic. It provides breathable air for at least 15 minutes depending on the toxicity and concentration of the inhaled air. The S-cap with its large facepiece provides almost full field vision and has a shelf-life of almost 8 years. It is for use in petrochemical factories, chemical factories, fertilizer plants, steel plants etc.

More from: Mine Safety Appliances Ltd.,
D-25 Transport Depot Road, Calcutta - 700088.

Heating Jacket

Thermi heating jackets are used for heating of reaction vessels, storage tanks or any other surface to be heated. The heating jackets are suitable to heat material in the vessel up to 300°C. It can also be designed for higher temperatures, up to 800°C. The heating jackets are flexible in nature and can be wrapped on the vessel to be heated. They are custom-built and are made as per the shape and size of the vessel. These heaters give uniform heating all over the surface. The good contact between heaters and vessel to be heated results in highly efficient heating and longer life for the heating pad.

More from: Thermopads, G-2-969/1/1
Khairatabad, Hyderabad, A.P. 500 004.

Human Interferons Protect plant leaves from Virus

Israeli scientists have discovered that interferon, an antiviral substance produced in the human body, can prevent the multiplication of viruses in plants. Treatment with a certain type of interferon considerably reduced the multiplication of the mosaic virus in tobacco leaves. If these findings are verified and authenticated in furteer studies, science may for the first time have a tool to combat viral diseases in plants with the help of anti-viral material of the interferon tupe which can be produced through genetic engineering. Participants on the research team include Prof Ilan Sela and Mr. Patricia Orchansky of the virology laboratory at the Hebrew University's Faculty of Agriculture in Rehvot and Dr. Menachem Rubinstein of the Weizmann Institute of Science, Rehovot.

(Continued on page 26)

ATTENTION CARDAMOM GROWERS!

***MULTIPLEX**–a judicious formulation of multimicro-nutrients and Plant Hormones helps in marvellous recovery of your plantations from drought, rejuvenates plants into lush health ....

*MULTIPLEX Soil Application invigorates plants to resist stresses of drought effectively.........

*MULTIPLEX formulation is backed by years of research and extensive field tests ....

*Try a free sample of MULTIPLEX Soil Application to convince youself of its excellent efficacy TODAY..... ...

*MULTIPLEX Folier Spray for Cardamom is already in the Market... .. ..

Manufacturers :
KARNATAKA AGRO CHEMICALS, P. B. No. 1031,
RAJAJINAGAR, BANGALORE-560010.

Monthly Statistical Abstract-August 1983

The final estimate of production of small cardamom for 1982-83 season is placed as 2900 M. T. with state-wise break up as indicated below:

Kerala	1900 M. T.
Karnataka	500 ,,
Tamilnadu	200 ,,
Total	2900 M. T.

The production season for cardamom has started. There has been failure of rain for a continuous period of 6 to 7 months from December '82 onwards. Frequent rainfall is absolutely essential for the growth of panicles till it reaches the flowering stage. On a rough assessment of the field position before the beginning of harvest it was estimated that there would be around 30% fall in production during 1983-84 season compared to the previous year's production. However the late South West monsoon showers contributed to an improvement in the situation than that was anticipated earlier. On the basis of the latest field sample study conducted it is estimated that the overall crop loss will be to the extent of 24% only.

AUCTION SALES AND PRICES

The State-wise auction sales and prices of small cardamom during August '83 and August '82 are given in Table 1.

TABLE A

State	August '83 Qty (M. T.)	Ave. price (Rs/kg)	August '82 Qty (M. T.)	Ave. price (Rs/kg)
Kerala	No auction		No auction	
Tamilnadu	2	250 28	2	145.74
Karnataka	8	269.45	10	147.01
Total	10	264 86	12	146.79

It may be seen from Table A that auction sales during August '83 has recorded almost equal quantity compared to the sales during August '82 The average price recorded an increase of Rs. 118 per kg. during August '83 compared to August 1982. However a marginal decline of Rs. 4 per kg in the average price has been noticed during August '83 compared to the average price prevailed during July '83.

EXPORT

Month-wise provisional figures of cardamom exported during 1983-84 received from the Customs Authorities on the basis of shipping bills passed compared to previous year's actual export figures compiled on the basis of date of shipment effected by the exporters are given in Table B.

It may be seen from the Table B that during the offseason period in April to August 1983 quantity has decreased by 40% and the earning has decreased by 24% compared to the off-season period of last year. But a rise in the unit price to the tune of Rs. 37.94 per kg has been recorded during 1983–84 compared to the same period of 1982-83. The reason for the decline in export was the limited stock position in the off-season coupled with very high price in the domestic market which made Indian Cardamom uncompetitive in the international marKets.

TABLE B

Months	1983-84 Qty (M. T)	Value (Rs)	U Value (Rs/kg)	1982-83 Qty (M. T.)	Value (Rs)	U. Value (Rs/kg)
April	112646	20277443	180.01	26800	3347404	124.91
May	13915	2586853	185.90	89860	13636396	151.75
June	14550	2190061	150.52	20950	2802955	133.79
July	500	173560	347.12	36593	5308539	145.07
August	6500	1055028	162.31	73745	9497004	128.78
Total	148111	26282945	177.45	247948	34592298	139.51

AUCTION SALES & PRICES

CENTRE	AUGUST 1983			AUGUST 1982		
	Qty Sold (kgs)	Maximum price (Rs/kg)	Average price (Rs/kg)	Qty Sold (kgs)	Maximum price (Rs/kg)	Average price (Rs/kg)
KERALA	NO AUCTION					
TOTAL (KERALA)	—	—	—	—	—	—
TAMILNADU						
Pattiveeranpatty	2339	277.50	250.28	2023	171.10	145.74
TOTAL (TAMILNADU)	2339	277.50	250 28	2023	171.10	145.74
KARNATAKA						
Saklespur	7381	336.00	269.77	9363	208.00	147.33
Sirsi	34	275.19	229.67	117	157.19	136.53
Siddapur	17	275 79	209.01	—	—	—
Mercara	—	—	—	71	140.00	122.75
TOTAL (KARNATAKA)	7432	336.00	269.45	9551	208.00	147.01
GRAND TOTAL	9771	336.00	264.86	11574	208.00	146.79

Source : Reports received from the licensed cardamom auctioneers.

All that is 'Spice' is Gold

- Indian spices sail the seven seas all the year round satisfying gourmets the world over and earning precious foreign exchange for the nation.
- Indian spices enjoy a very good reputation and a world market that is expanding every day.

"Take to Growing Spices -- Take to Exporting Spices"

The Spices Export Promotion Council renders the help you need to export spices. Please ask for the council's free booklet "ABOUT OURSELVES & HOW WE HELP YOU."

THE SPICES EXPORT PROMOTION COUNCIL,
"World Trade Centre", Mahatma Gandhi Road,
ERNAKULAM SOUTH, COCHIN-682 016.

(It pays to grow and export all items of spices)

CULTIVATION OPERATIONS

MONTH **NOVEMBER**	South-West Monsoon areas (Kerala-Tamilnadu)	North-East Monsoon areas (Tamilnadu)	South-West Monsoon areas (Karnataka)
Primary Nursery	Clearing the site for the primary nursery. Two rounds of digging and removal of weeds, stubbles, stones etc.	Formation of beds and spreading jungle soil over them, Watering to allow weed seeds to germinate. Uprooting of seedlings from previous season's primary nursery for transplanting to secondary beds.	Completing pandal construction and covering with leafy twins or coconut fronds. Routine watering and prophylatic plant protection measures.
Secondary Nursery	Plant protection measures. Watering as required. Second round weeding.	Uprooting of left over secondary seedlings for gap filling in field. Transplanting of primary seedlings for newly formed secondary beds. Mulching with dry leaves and watering.	Routine watering, plant protection and weeding.
Starting of New Plantations	No work	Gap filling	Routine maintenance.
Maintenance of Plantations	Third round harvest. Thrips control. Forming basins around one year old plants continued.	Third round harvest. Thrips control. Second round weeding continued.	Harvest, curing, storage. round Watch and ward.

Continued from page 23

Photodegradable plastic sheeting for Agriculture

Israeli farmers are using an ingenious plastic covering in their fields which simply melts away when no longer needed. The material decomposes in sunlight after several months, leaving no residue to obstruct automatic harvesters and plowing machinery.

The photodegradable plastic is the invention of Israeli Dan Gilead ann Britisher Gerald Scott, who worked together at Kibbutz Hazorea, one of the many Israeli communal farms that also engage in technological research and industry. The enterprising two developed a chemical which, when added to plastic during its manufacture, makes the sheeting sensitive to the ultraviolet rays of ordinary sunlight-but only at a predetermined time.

The decomposition is complete: all elements of the plastic disintegrate into compounds commonly existing in the environment, such as carbon dioxide and water vapour.

Analysis of Export prices of Cardamom During the Period 1977-78 — 1981-82

Dr. C. A. JOS

The prices of cardamom have been always characterised by a high degree of instability mainly because of wide fluctuations in production. Cardamom is one of the few crops the production of which leaves a large surplus for exports. India exported about 62 per cent of her production on an average, during the period in question. Needless to say, it is an exacting crop to grow and is very sensitive to soil and climatic conditions and, therefore, fluctuations in production take place either in India or elsewhere. In terms of 1979-80 figures, the world production of cardamom is at the level of 8000 M. T. of which India accounts for 56 per cent followed by Guatemala with 33 per cent. The other two important producers are Tanzania and Sri Lanka with 5 per cent and 6 per cent respectively. But in the matter of exports the Indian share is only 47 per cent closely followed by Guatemala with 45 per cent while Tanzania and Sri Lanka export 5 per cent and 3 per cent respectively in the year 1979-80

It is quite interesting to study the relationship between the export prices of cardamom and weighted average prices of cardamom at auction centres in India during the period, 1977-78 to 1981-82 as given in Table No. 1.

It is clear from the table that in all the years under review, the f. o. b. prices are definitely higher than the local prices. If we are to work out the value of co-efficient of correlation between these two prices, it would be +.87, showing a very high degree of relationship between these two. However, the difference between the weighted average prices at auction centres and the average unit export prices varies from Rs. 13.85 in 1981-82 to Rs. 49.35 in 1977-78 per kilogram, during this five-year period. The difference between the average prices of cardamom at auction centres and average export prices works out Rs. 37.97 per kilogram over the period 1977-78 to 1981-82. The prices at the auction centres are much more sensitive than the export prices. This is clear from the fact that the percentage increase in prices at the auction centres in 1978-79 over 1977-78 was 23.82 while the increase was only 15.7 per cent in the case of export prices for the same period. Similarly in the two succeeding years the annual percentage fall in prices at the auction centres were 18.95 and 26.67 respectively, where as the corresponding figures were 9.2 and 19.89 in the case of export prices. However, in the year 1981-82 when the prices at auction centres registered an increase of 17.30 per cent over the previous year, the export prices recorded a fall of 12.36 percent during the same period. One may, therefore, conclude that the exporters of cardamom are always offering a competitive price at the auction centres and absorbing themselves the incidence of price variations considerably to the advantage of the producers of cardamom.

JOURNAL OF PLANTATION CROPS

- Official publication of the Indian Society for Plantation Crops; published twice annually in June and December. Volume XI in 1983.

- Publishes speedily original research articles and reviews on all aspects of all the plantation crops including spices and condiments.

- Subscriptions: Rs. 75 in India, US $ 20 elsewhere

- Special publications: The Indian Society for Plantation Crops has also sponsored the the following given Symposia on plantation crops (coconut, arecanut, cashew, tea, coffee, rubber, cocoa, pepper, cardamom, ginger, turmeric, tree spices, clove etc.)

  (1) Proceedings of the First National Symposium on Plantation Crops, Trivandrum (India), December, 1972, 220 pp. Rs. 50 (US $ 20)

  (2) Proceedings of the First Annual Symposium on Plantation Crops, Kottayam (India), March, 1978. Agronomy, Soils, Physiology and Economics of Plantation Crops., 540 pp. Rs. 75 (US $ 25)

  (3) Proceedings of the Second Annual Symposium on Plantation Crops, Ootacamund (India), June, 1979. Plant Protection Aspects of Plantation Crops. 555 pp. Rs 75 (US $ 25)

  (4) Proceedings of the Third Annual Symposium on Plantation Crops, Cochin (India), December, 1980. Processing, Technology and Marketing. 432 pp. Rs. 75 (US $ 25)

  (5) Proceedings of the Fourth Annual Symposium on Plantation Crops, Mysore (India), December, 1981. Genetics, Plant Breeding and Horticulture. 485 pp Rs. 75 (US $ 25)

- Editorial correspondences, manuscripts, and books for review: To the Editor, Journal of Plantation Crops, Central Plantation Crops Research Institute, Regional Station Calicut-673 012 Kerala, India.

- Correspondences regarding subscriptions and membership and for special publications:

The Secretary
Indian Society for Plantation Crops,
Central Plantation Crops Research Institute,
Kasaragod-670 124,
Kerala, India

Table No. 1

AUCTION PRICES VIs-a-VIs-EXPORT PRICES

Crop year	Weighted Average Prices at auction Centres. (Crop year) Rs./kg.	Average unit Export prices (F. O. B.) (Financial year) Rs./kg.
1977-78	134.41	175.28
1978-79	166.42	202.92
1979-80	134.88	184.23
1980-81	98.91	148.18
1981-82	116.02	129.87

The established exporters do sometimes enter into contracts with the foreign importers of cardamom much before the arrivals of the produce into the auction centres. Depending upon the forecasts made by the exporters, they conclude sale contracts with their counterparts in the foreign countries. One of the main reasons for this practice is that fresh cardamom with its green colour always command a premium price in the overseas market, especially in the Arab markets. Another reason is that the exporters need not tie up their capital unduly for a long period which would further increase the cost of marketing and lastly, this had been the time-honoured practice which is very difficult to break by any one.

When we analyse the monthwise exports of cardamom we will find that the maximum quantities are exported in the month of December followed by either November or January depending upon the variations of the harvest season. During the period 1977-78 to1981-82 the exports were the maximum in the month of December with the only exception of the year 1981-82where the maximum export was recorded in the month of November. Curiously enough, the prices obtained in the month of December is invariably higher than the average price of the year with a marginal exception in the year 1980-81. This is mainly because the best cardamom of the season, fresh with the green colour, are ready for export during the period November–January when the oil rich Arab countries are making their bulk purchases. The table No. 2 shows month-wise export of cardamom from India.

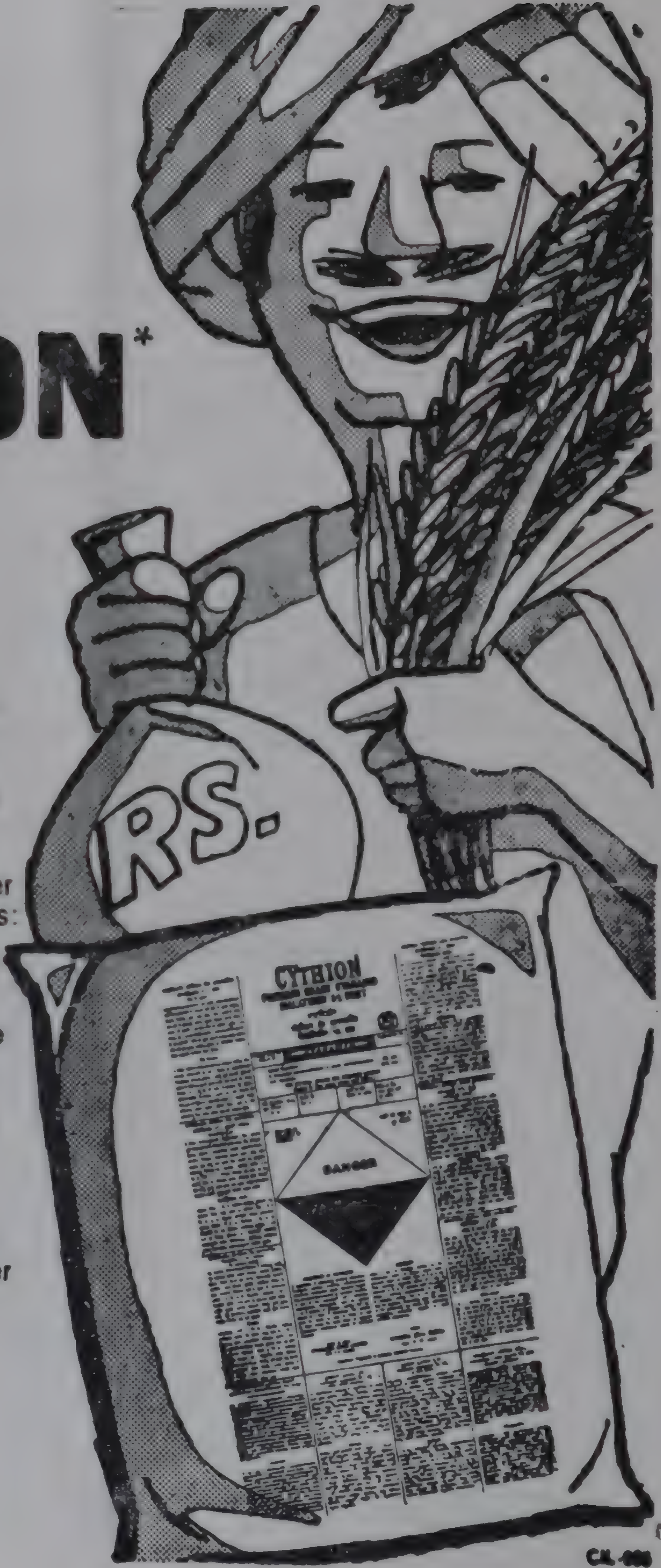
The total exports during the months November - January works out 45.51 per cent. on an average during the period 1977-78 to 1981-82. If the year 1977-78 was quite successful for the cardamom

Table No. 2

MONTH-WISE EXPORT OF CARDAMOM FROM INDIA

Months	1977-78		1978-79		1979-80		1980-81		1981-82	
	Qty M.T.	U. Value (Rs /kg)	Qty. M.T.	U. Value (Rs. kg)	Qty. M T.	U. Value (Rs./kg)	Qty. M.T.	U. Value (Rs./kg)	Qty. M.T.	U. Value (Rs./kg)
April	104	198.20	230	171.08	215	187.82	227	149.87	277	115.67
May	199	186.50	177	167.73	141	191.08	178	160.32	98	110.49
June	159	176.96	104	171.43	168	177.46	89	162.23	123	112.88
July	76	168.85	78	196.81	76	176.51	187	157.99	112	130.57
August	90	176.20	30	184.01	62	173.27	66	148.90	79	127.61
September	87	162.28	64	190.60	37	178.37	65	142.37	117	127.24
October	388	164.66	252	215.56	174	206.29	134	151.49	132	131.95
November	428	169.54	273	218.54	330	203.50	363	140.06	470	139.56
December	546	178.98	624	209.07	413	18.652	463	146.68	355	134.92
January	266	180.96	356	219.45	413	179.03	236	147.00	334	137.03
February	210	173.78	384	212.98	335	169.67	160	149.38	117	126.12
March	210	174.65	295	195.36	272	172.40	177	136.83	110	130.11
Total	2,763	175.28	2,876	202.92	2,636	184 23	2,345	147.59	2,325	129.87

Source: Cardamom Board.



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It is efficacious: protects plants, and animals against a large number of insect pests.

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CIL-[illegible]

industry both in terms of exports and unit value, the subsequent year was more successful in all the aspects vis-a vis the production, exports and unit value. This again shows the success of the Indian exporters of cardamom in securing the most competitive rates for the commodity. The author may be permitted to comment upon the success story of the cardamom exports, in the wake of the tendency of increasing production and exports in the year 1978-79. This was possible only because of the close co-operation between the exporters and the officials of the CardamomBoard. This experience also throws much light upon the business ingenuity of the exporters which has no substitute either in the public sector or in the co-operative sector. Though these sectors have creditable achievements elsewhere, in the export trade of spices in general and of cardamom in particular, the private sector seems to be the best, provided they are regulated and advised by the competent authorities.

If we were to look back to the year 1971-72, when exports increased by 442 M. T., over the previous year the prices declined from Rs. 65.78 to Rs. 37.41 per kilogram. It happened in the year 1971-72 that the foreign buyers refrained from buying cardamom from India and the prices crashed. Once the market declines, the buyers are more reluctant to buy with the hope that prices may further fall. Consequently the exporters become feverishly busy in unloading their stock which further depresses the price. The increased offerings made by the exporters in the year 1971-72 at lower and lower prices prevented the foreign importers to commit themselves in the off-take of cardamom from India. To trace the history, in the month of October 1971, the total quantity of cardamom exported was 222 tonnes at the rate of Rs. 41.86 per kilogram and in the following month a quantity of 311 tonnes was offered at the rate of Rs. 38.55 per kilogram consequently, the exports in the month of December of the same year could command only Rs. 30.56 per kilogram. The net result of this phenomenon was that foreign exchanges earnings out of the exports of cardamom in the year 1971-72 declined by more than 28 per cent over the year 1970-71 in spite of the fact that the exports were higher by 26 per cent during the same period. It is in this context that we have to appreciate the performance in the year 1979-80 when the production was an all time record.

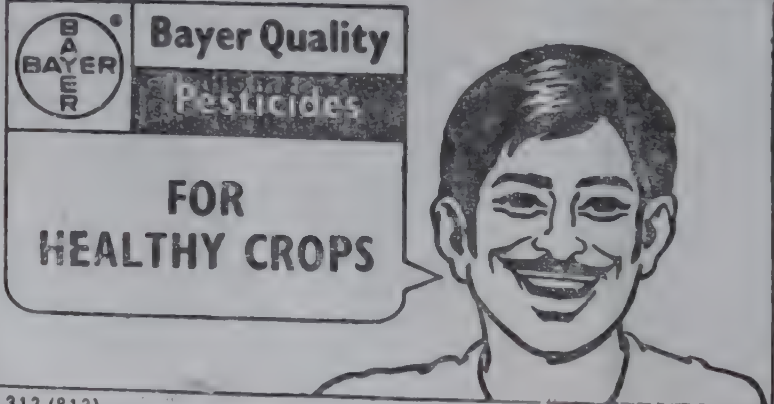
The months, July-September record the minimum of exports in every year and the unit price realised is also relatively lower than the other months of the year for well-known reasons. Having exported the best varieties at the most attractive prices what is being left out is exported according to the demand from the exporters, generally at lower rates of price. The percentage share of exports during this quarter of the year works out only 7 per cent for the years 1977-78 to 1979-80. However in the years 1980-81 and 1981-82, this share has almost doubled in the wake of declining prices which started from April, 1980 and continued up to August 1983.

However, in the latter years of the period 1977-78 to 1981-82, the prices declined continuously in spite of the decrease in the exports of cardamom from India. But the decline in the prices were quite orderly without resulting in a crash as in the case of 1971-72. The world market has now restored the equilibrium in terms of production and stock with the foreign importers on one side and the demand on the other. It may reasonably be expected that the prices may stabilize at the levels prevailed in the year 1979-80, barring any unforseen contingencies.

Embargo on visit to Qatar

Our Embassy in Doha (Qatar) has informed that the Qatar Govt. will not allow visitors for a period of two months from September middle to November (15-9-83 to 15-11-83) in view of the forthcoming summit of Arab Gulf Co-operation Council to be held in November. Even 72 hours business visas available at the Airport on pre-arrangement with sponsors have also been suspended during this period.

Cardamom:
Queen of spices, continuously being attacked by various pests.



The major enemies of Cardamom are:

- —THRIPS
- —APHIDS
- —FRUIT BORER
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15-312 (812)

New schemes to rejuvenate drought hit Cardamom Plantations

The Text of the Speech delivered by Shri K. Mohanachandran IAS, Chairman, Cardamom Board at the 44th Meeting of the Cardamom Board held at Cochin on 11-10-1983.

I have great pleasure in welcoming the Honourable Members of the Cardamom Board to its 44th meeting. I deem it a privilege to extend a special welcome to the Honourable Members of Parliament who, amidst their very tight schedules and activities, found time to partake in these deliberations. I am sure that their rich knowledge and vast experience would contribute much to solving the unusual problems which the cardamom industry is facing at present. May I also extend a hearty welcome to the distinguished special invitees who have responded to my request to be present here today for this very important meeting. Indeed it is a matter of extreme happiness that the Director of the Ministry of Commerce, Government of India has also found it convenient to be present today for the discussions. Needless also to say that his presence in this meeting will greatly help us with his staunch support for the various recommendations and decisions of the Board to ease out the Indian Cardamom industry from its present crisis. With great pleasure, I welcome him to the 44th meeting of the Cardamom Board.

As you know, the cardamom industry has been passing through difficult times for the last two years. But this year because of the severe drought that affected the cardamom tracts, the difficulties of the industry has only increased. As I have mentioned in the last Board meeting, the drought has affected about 30% of the plantation. A special Sub-Committee which was constituted to visit the drought affected areas visited the areas and has submitted its report which is coming up for consideration as a separate item. On the basis of the report of the Sub-Committee, we had proposed many schemes for the rehabilitation of the drought affected areas-most important of which is increasing the number of certified nurseries, starting mini polybag nurseries to produce 10 month old nurseries and also replantation of drought affected areas of 1500 hectares. Out of this, Government of India has sanctioned the starting of polybag nurseries and the other scheme is pending with Government of India. I am happy to inform you that the Government of India has sanctioned the scheme for replantation of the old and uneconomic cardamom plantation with a subsidy of Rs. 2,500/- per hectare and Rs. 7,500/-from Nationalised Banks. I would like to place on record the Board's appreciation of the Government's sanctioning the scheme as it felt that it will be a very useful scheme for the cardamom growers as this will help the growers to replant their old plantations with high yielding varieties. As mentioned earlier, we have a special emergency programme to replant an area of 15000 hectares in the next three years commencing from 1984-85. This is over and above the sanctioned scheme to replant a total area of 10900 hectares, which had by then been submitted to Government of India for its final approval. The scheme to replant 15000 hectares of drought affected areas in coming three years is under active consideration of the Government and I am sure that the Government would issue its approval shortly.

The Board has now geared up its entire machinery to implement the already sanctioned Replantation-Loan Cum Subsidy Scheme as swiftly as possible. As soon as the sanction is received necessary publicity has been given through the newspapers and other media about the scheme inviting application for replanting the areas

In order to meet the huge demand for planting material in the coming years the Board has already taken action to open 200 certified nurseries, 3 additional departmental nurseries and 2000 polybag nurseries besides enhancing the existing targets of the Board's nurseries With these measures, we expect to produce a total of 72 lakh seedlings against the requirement of 88 lakhs the deficit of which, I hope, could be made up by the private nurseries.

As regards production and exports of cardamom, I must inform the Board that it has been on the decline since the past two years The decline in production during 1981-82 was marginal viz. from 4400 M. T to 4100 M. T. But in 1982-83 it fell sharply to 2900 M. T. mainly because of the failure of the monsoons. During 1983-84, the production is expected to much lower as a result of severe drought. While earlier we thought the production to be very low, there is a feeling among the growers that the crop has improved to some extent as a result of good rains received in late August and September. Last year our exports has come down to 1021 M. T. as against 2325 M. T of the previous year. The fall in Production coupled with the high prices which prevailed for cardamom in the Indian market are the predominant factors which caused this erosion in exports. This only shows that unless we take steps to make cardamom reasonably competitive in international market, we may not be able to compete successfully and resist international competition. This year during tha off season, the exports from April to August was only 148 tons valued at Rs. 262 lakhs with a unit value of Rs. 177.43 as against 248 tons valued at Rs. 346 lakhs with a unit value of Rs. 139.51 during the corresponding period last year. Thus during the off season the reduction in exports was 40% in quantity and 24% in value The main reasons for the shortfall during this period also was non-availability of cardamom for exports as well as the very high value which prevailed in the domestic market.

In order to effectively compete with Guatemala in the overseas markets, we must strive to obtain the optimum production per unit area and thereby lessen the cost of production. The implementation of the replantation schemes of the Board are expected to yield the twin objectives of increasing the productivity and reducing the cost of production.

However, it is necessary that we should hold on in our traditional markets like the Middle East. It was with this objective, Government of India sanctioned a cash compensatory support of 7% for packaged cardamom upto 2 kg. We have also requested Government of India to allow this cash compensatory support to packages upto 5 kilo and the decision of the Government of India is expected soon.

On the basis of our requests to the State Government, the Government of Kerala has agreed to give salestax concession for purchases at the auction intended for exports. Since there were some doubts on procedures, a discussion was arranged between the Salestax Commission of Kerala, and the Salestax Officers and the representatives of auction companies and a procedure was evolved to make the salestax concession available to exporters. I am hopeful that the benefits of the salestax concession will be made available this season to the exporters.

Now that the season has started, it is necessary that we discuss all steps to ensure atleast reasonable exports to the Middle East. Traders, exporters and farmers have to play a significant role in this in seeing that the prices are maintained at reasonable levels to enable exports facing international competition. An attempt has been made to streamline the auction system this year by insisting on payment to growers in 21 days without fail and by exporters, dealers to auction companies on 14th day. This was decided as a result of a series of discussions with auction companies and exporters. Eventhough some growers' organisations have requested to introduce cash-and-carry system, on the basis of discussions, it was felt that eventhough cash-and-carry was a good system, it was not possible to introduce it without taking suitable measures like creatring warehouse facilities etc. But It was felt that 14 days and 21 days should be strictly enforced to redress the grievances of farmers.

As you are also aware we have gathered here today primarily to discuss and finalise the budget proposals of the Board for 1984—85. The budget proposals are before you. We have projected an estimate of Rs. 343 lakhs for 1983—84 in the Revised Estimate as against orginal estimate of Rs. 251 lakhs. This Increase was necessitated mainly for the implementation of the Development Schemes and Market Promotion Schemes.

The Budget Estimates proposed for 1984-85 shows a further increase of more than Rs. 100 lakhs (viz. Rs. 457 lakhs). The increase is mainly because of the need for implementation of the new schemes ane the special schemes for drought affected areas.

In this connection, I invite the attention of the Honourable Members to the fact that the collection of cess from exports has come down and our expenditure has been increasing and therefore, we should try to consider measures to improve the cess collection. As we have pointed out in the last meeting, tha collection of export duty on cardamom is about Rs. 11 31 crores credited to the Consolidated Fund of India. It was suggested that this may be considered as a revenue to adjust the increased expenditure for the few years till the industry is able to give a good account of itself. There is also a proposal to improve the cess collection by shifting the cess on production. This is separately coming up for discussion as an item in the agenda.

As the members are already aware, the Government of India was in touch with other cardamom producing countries to form an international community for cardamom, to have co-operation between producing countries and to avoid wasteful and mutually destructive competition in the consuming markets. As the members would remember, Cardamom Board had earlier invited the representatives of the Guatemalan Producers' Association to India to have discussions on this. As a result of the efforts of the Indian Ambassador in Mexico, the Guatemalan Producers' Association had held a further discussions on this matter at Guatemala on July 12, 13 and 14 The Government of India had deputed the Chairman, Cardamom Board to attend the meeting. The Indian Ambassador to Mexico also attended this meeting. The Guatemalan side had evinced keen interest in having mutual Co-operation in various fields like agricultural research, market development and promotion as well as understandably on prices. They had promised to discuss the further details on these areas of co-operation in a subsequent meeting. It is therefore felt that it may be possible for us to move faster in the direction of the international community.

I am also happy to mention in this meeting that the Board has recently conducted a Consumer Research study under the assistance of ITC/SIDA on the preferences of Indian Cardamom by Arab consumers The study has revealed that most of the Arab consumers still prefer Indian Cardamom and that Indian Cardamom has a superior rating in almost all attributes looked for by Arab consumers. This is a very useful information and we are studying as to how this useful information can be utilised to develop a market strategy for the Middle East. A dissemination Seminar was also held in Cochin to inform the exporters on the findings of this survey.

This meeting is an important meeting as this is expected to discuss the revised budget for this year and the budget for the next year. We have also a long agenda. Let me therefore once again welcome you all and invite you for a fruitful and useful discussion.

CARDAMOM COMPANION 1984

Arrangements are being made to release the ''Cardamom Companion 1984'' by the first week of December. This publication would contain a printed text of nearly 40 pages on the multifarious aspects of cardamom industry, statistics on production, exports etc. in addition to informative write-ups on the new schemes being launched by the Board. It will also have an excellent diary for 1984 with one-day-a-page along with many other indispensable information.

The ''Cardamom Companion 1984'' would be a unique publication which will be of great help to all those who are connected with cardamom industry in one way or the other.

The price per copy would be around Rs. 18/- (postage free).

Only limited copies are available for sale. To avoid disappointment rush your orders immediately by sending a D.D./M.O. drawn in favour of the Secretary, Cardamom Board, Cochin-682 018.

Trade & Exports

KUWAIT: HINTS TO VISITORS

Climate

Kuwait is located in the desert zone and has a continental climate. Throughout the year, this climate produces wide variations in temperature, sparse rainfall and occasional duststorms.

Winter (December–February): Winters are generally mild. Temperatures can sometimes dip to zero centigrade when winds come from the north–west, while southeast winds bring warm spells. Occasional rainfall is sometimes accompanied by thunderstorms.

Spring (March-May): Springs are very pleasant with cool nights and warm days. Warm air is carried by prevailing southerly winds and cooled by occasional rains.

Summer (June-September): Summer days are hot with some varying breezes. July and August are particularly hot with temperature occasionally reaching 50° centigrade. These are a few dust storms while light warm sea breezes increase the humidity.

Autumn (October-November): Autumn days are warm to hot in October and mild to cool in November. Nights are cool. There are variations in humidity and temperature with occasional light rains towards the end of the season.

Area

17,656 sq. km. of an arid desert and a very small portion of offshore islands. Kuwait City is the Capital.

Population

1,356,827 (180 census) indicating an increase of 36.3 per cent over the 1975 figures. Kuwaiti nationals constitute 41 per centl non–Kuwaitis include Palestinians, Egyptians, Iraqis, Syrians, Iranians, Indians, Pakistanis and others. Indians are estimated to be around 115,000 the third largest community amongst the expatriates.

Language

Arabic is the official language. English is widely used in commerce and banking. Some of the older generation of Kuwaitis also know Urdu.

Currency

Kuwati Dinar divided into 1,000 fils. KD 1=Rs. 32 approx. There are no foreign exchange restrictions.

Religion

Islam is officially the religion of the State. Sunnis are in a majority; Shias are about 20 per cent of the total popolation.

Time

GMT + 3.

Banking Hours

0800–1200, Saturday through Wednesday. Thursday early closing.

Business Hours

(Closed Fridays, half day Thursdays)
Government: 0730-1330 (winter), 0700–1300 (summer)
Private: 0830-1230 and 1630-2000 Shopping: 0830–1230 and 1630 2100.

Official Holidays

1 January: New Year,
18 January: Prophet's Birthday, 25 February: National Day, 31 May: Al Esra, 1-6 August: Eid-ul-Fitr, 9, 14 October: Eid-ul–Adha, 28 October, Al Hijra. All Fridays.

Hospitals & Pharmacies

Emergency treatment: Sabah Hospital, Tel. 815000, Amiri Hospital, Tel. 422121, Mowasat Hospital, Tel. 610347.

Alcohol is banned in Kuwait.

Customs officers will normally confiscate bottles if they are found in luggage but it is an offence to possess alcohol in Kuwait, punishable by anything from a month to a year in prison.

Transportation

Taxis: There are two types of taxis in Kuwait There is the ''private'' taxi and the ''common'' or shared taxis (identifiable by the dark orange colour) which run along set routes throughout the city. Officially fares should not exceed KD2 within the city limits. A taxi from the airport to the city should cost around KD3; shared taxis are much cheaper. To help taxi drivers it is sometimes necessary to write down addresses, as they do not understand directions easily.

Buses: Kuwait bus services run throughout the city suburbs and fares range from 40 to 70 fils.

Car Hire Firms: Avis Cars-Tel: 417500, Al-Ghanim Company Tel: 423327, Automobile Club-Tel: 423008, Jazeera & Quoraini Transport Company, Ahmadi-Tel. 980554.

Driving permits will be issued to visitors from the Traffic Section of the Police Department on presentation of an international Driver's Licence.

Shopping

Kuwait's largest department stores are in Fahad al Salem Street where imported consumer goods can be bought. The main souk is one of the few modern airconditioned commercial complexes in Mubarak al-Kabeer Street.

Mainly modern imported goods are sold here and the shops run along the ground floor and the mezzanine. Fahad al-Solem Street also has the Souk al-Kabu which is developing into a large commercial centre.

Of the old souks, the one in Palestine Street still attracts many customers, with small traders from outlying areas selling their wares However. there are few traditional items for sale.

Telephones

Local telephone calls are free and can be made trom any shop on request.

International calls must be made through an operator.

Main post office

Fahad al-Salem Street, Safat Square.

Hotels

Kuwait Hilton: de luxe class; 212 rooms; Tel: 530000, Bnaid al-Gar Street, PO Box 5996.

Kuwait SAS Hotel: 5 star de luxe class; 216 rooms; Tel: 657700 Al Ride Beach, PO Box 26199, Safat.

Kuwait Sheraton de luxe class; 470 rooms; Tel: 422057, Fahad al-Salem Street, PO Box 5902.

Messilah Beach Hotel: 5 star class; 350 rooms; Tel: 613466, Mesdilah Round about, PO Box 3532.

Marriot Hotel : 5 star class; Tel: 835344, PO Box 24285, Safat.

Golden Beach : 4 star class, 44 rooms; Tel: 339521, Arabian Gulf Street, PO Box 3483.

Carlton: 4 star class: 75 rooms; Tel: 423171, Fahad Al-Salem Street. PO Box 3492.

Bristol: 4 star class; 115 rooms; Tel: 439281, Fahad al-Street, PO Box 3531

Sahara Hotel: 4 Star class; 52 rooms; Tel: 424121, Al-Sour Street, PO Box 20461.

Phoenicia: 4 star class; 7e rooms Tel: 421051, Fahad al-Salem Strset, PO Box 4666.

Ambassador: 3 star class; 32 rooms; Tel:425288, Abdullah Al-Ahmed Street. PO Box 2813.

New Cedar: 3 star class; 20 rooms Tel: 4432938, Sharq (nr. Hamra Cinema), PO Box 1793.

Hotel Meridien: de luxe class; 370 rooms; Tel: 449222, Commercial Centre, PO Box 26302, Safat.

Travel Agents

Al-Gharabally: Fahed al-Salem Street, 420401.

Al-Mulla: Fahad al-Saiem Street, 423231.

Globe Express: Fahad al-Salem Street. 432969.

Kuwait Travel Bureau: Fahad al-Salem Street, 434183

Reem Travels: Phoenicia Building. Hilali Street, 426504.

International Travel Fahad al-Salem street, 424962.

Bulchamseer Travels: Souk al-Kuwait Building, 447725.

Thomas Cook Kuwait Travels:

Anwar al Sabah Building. Fahad al-Salem Street, 424799.

Indian Embassy:
34 Istiqlal Street,
PO Box 1450,
Safab,Kuwait
Tel: 530600/530612.

News Shorts

Commerce Ministry Representative in the Cardamom Board

Central Government has appointed Sri Pawan Chopra, Director, Ministry of Commerce, as a member of the reconstituted Cardamom Board, vice Sri. I. A. Khan, Director, Ministry of Commerce.

Cardamom Growers' Meeting at Kabi

A meeting of Cardamom growers of Kabi area was held at Kabi, North Sikkim recently. More than 45 planters from the nearby villages attended the meeting, which was mainly arranged to discuss the curing and marketing problems of Cardamom.

Mr. T. D. John, Deputy Director, Cardamom Board, Tadong presided over the meeting. In his speech, he explained the benefits of scientific curing of cardamom through Board's cardamom curing house located at Kabi, and the advantages over the local "Bhatti" system of curing.

Shri Kalzong Gyatso also emphasized the need to take up scientific curing. In the discussion that followed, the planters put forth their problems such as transportation of raw cardamom from villages to the curing house, in addition to their marketing problems. Suitable solutions to solve these problems were given by the Board's officials.

Shri. Lal Bahadur Subba, Cardamom Board welcomed the planters and Shri. D. Rathakrishnan, Assistant Director proposed vote of thanks.

Budget of the Board

Budget proposals of the Board for 1983-84 and 1984-85 have been approved by the Board at its meeting held on 11th Octoder 1983 at Cochin.

The anticipated expenditure for 1983-84 is Rs. 343.75 lakhs against the approved Budget Estimates of Rs. 251.40 lakhs. The expenditure anticipated for 1984–85 is Rs. 457.01 lakhs. Major portion of the expenditure during both years is for implementation of the Developmental Schemes.

Major Developmental Schemes for implmentation are;
(i) Cardomom Replanting Subsidy Scheme, (ii) Subsidy for Soil Conservation Progammes, (iii) Subsidy for supply of Plant Protection Chemicals and Equipments, (iv) Subsidy for bee-keeping etc Taking into consideration the high demand for planting material it has been decided to subsidise 200 certified nurseries of planters as against the existing 66.

Cardamom Act 1965 Extended to Sikkim

In accordance with the Notification of 22-7-83 issued by the Ministry of HomeAffairs, Cardamom Act 1965 has been extended to the State of Sikkim "adverbum".

In the non-plan budget, major emphasis is given on Market Promotion activities, Plantation Labour Welfare measures, Field Publicity Programmes etc. It is also proposed to start the construction of the Board's Head Office building complex at Cochin during 1983-84 for which a provision of Rs. 15.00 lakhs has been provided in R. E. 1983-84 and Rs. 35.00 lakhs in B. E. 1984-85.

Measures to Ease Congestion in Ports

Various measures are being considered by the Ministry of Shipping and Transport to the prevent congestion in the major ports, particularly in Bombay and Calcutta.

It has been suggested that rationalisation of nomination of vessels to ports of discharge is the need of the hour to safeguard against congestion because of bunching. The Secretary, Ministry of Shipping and Transport, has pointed out that the bunched arrival of ships at a particular port must be avoided so as not to upset the work schedule of the port, which leads to congestion. He has suggested that the committee responsible for the rationalisation procedure should work more effectively so that optimum results can be obtained from the available infrastructural facilities at the ports.

More Foreign Funds Earmarked for Export Promotion Measures

The re-constituted Export Service Co-ordination Committee has suggested new proposals to utilise a portion of the funds of international Agencies like International Trade Centre (Geneva), UNCTAD GATT and other agencies like Common Fund for Technical Co-operation (CFTC) and Swedish International Development Agency (SIDA) for conducting marketing surveys, buyer-seller meets and product promotion in selected areas and seminars on export promotion. The Committee also suggested that export-oriented production programmes should include guidance to manufactures on product designing and quality control, setting up of design centres etc. It was pointed out that the technical and financial assistance available from these international agencies should be used to develop management skills and build up effective information system.

Steps to Boost Exports Urged

Addressing a Seminar on the Import Export Policy for 1983-84, organised by the All India Importers' Assn. at Bombay recently, the Commerce Secretary urged the importers-exporters to establish close links between manufacturers and actual users to achieve steady industrial growth in the country, maximise exports and reduce unnecessary imports. Exports and imports have to move simultaneously in co-ordination, which would serve the twin objectives of import substitution as well as an enhancement of export earnings. He also added that while maximising her exports, India could not close the door to imports altogether as we could buy several products cheap abroad rather than manufacturing in the country itself.

Stress on More Export Houses

The Commerce Secretary, Mr. Abid Hussain, has stressed upon the need for setting up more export houses to assist small units in selling their product abroad. Speaking on problems and Prospects on the Foreign Trade Front' at a meeting organised by the Indian Merchants' Chamber at Bombay recently he stated that sustained and concrete efforts were necessary to create confidence in buyers abroad

Dryland Farming Scheme

The Union Agriculture Ministry has initiated a new Centrally-sponsored scheme to popularise improved agronomic practices among dryland farmers towards boosting the low per hectare yield in rain-fed areas. The scheme, which is a part of the series of measures to develop dryland agriculture, would be implemented in 19 districts of 15 States.

The main thrust under the scheme would be to demonstrate the effect of improved practices like crops substitution, inter-cropping utilisation of improved varieties of seeds, double cropping and appropriate placement of seeds and fertilisers through seed-cum-fertiliser drills to farmers. In all, 1,000 farming families would be provided with such drills at subsidised rates along with an incentive of Rs. 108 comprising of Rs, 100 for seeds, Rs. 200 for fertilisers and Rs. 100 for plant protection measures, initially.

Wider Operations for Exim Bank Likely

The scope of the Export-Import Bank may be widened to enable the bank to fund export of products other than engineering goods. So far, the Bank had been concentrating on funding projects which involve about Rs. 400 crores worth of engineering goods exported every year. There had been repeated demands that export finance from the bank must be available for other sectors in order to build up medium and long-term export prospects.

Rural Development Fund to be set up

Government has reportedly decided to set up a National Rural Development Fund.

Donors to this fund, when it was set up might indicate their preference for the area, locality and the rural development programme for which their donation was to be used, as also the voluntary agency through which the programme may be implemented.

The Finance Act, 1983 had made a new provision for the deduction of donations made by tax payers to such a fund to be notified by the Union Government, as it is not the intention of the Government that deserving rural development programmes should be deprived of financial support.

Promotion of Indo & Arab Investments

A company has been established to promote and mobilise Arab investments in on–going and anticipated Indian projects. It aims at bringing investments from Arab and Gulf-based non-resident Indians into such projects as may require their participation. Besides arranging finances it will also monitor such foreign investments by representing its clients abroad and maintaining a close liaison with, both the Indian promoters as well as financial institutions.

Interested parties may contact: Dr. S. L. Sharma, 3-A, Rajhans, 33, Prithviraj Road, New Delhi: Telephone No. 692949 for further details.

Loan Priority to Small Units

The Reserve Bank of India has instructed all commercial banks to not only treat loans extended to small scale industry as priority sector advances, but also grant a certain degree of preference to the credit demands of such units besides offering concessions in the matter of interest, margin and repayment periods.

Business Correspondence Minutes and Reports

The 12th Edition of Business Correspondence Minutes and Reports by Mr. J. C. Bahal and Mr. S. M. Nagamia has been recently published. It is expected to meet the requirements of students of B. Com Degree courses, business executives and others interested in the writing of effective business letters and reports. The present edition has been revised and up-dated and also enlarged by the addition of two new chapters. One of them deals with general business reports and the other with market reports.

Priced at Rs. 35,00 per copy, the publication is available from: N. M. Tripathi Private Limited, 154 Samaldas Gandhi Marg, Bombay–400 002.

Financial Development of India

The Oxford University Press, New Delhi, has brought out its latest publication entitled 'Financial Development of India–1860-1977' by Raymond W. Goldsmith. The study was started around a decade ago as the second of a planned series of half a dozen case studies, which were intended to supplement and illustrate the approach developed in Financial Structure and Development (1969) by the same author. However, taking into consideration the time factor, the present book is essentially the result of work done during the period. Priced at Rs. 125.00 per copy, the publication is available from Oxford University Press, 2/11, Ansari Road Daryaganj, New Delhi-110 002.

Seminar on Indo-German Economic Co Operation

In co-operation with the Cochin Chamber of Commerce & Industry, Cochin, a Seminar on Indo-German Economic Co-operation has been arranged by Indo-Germen Chamber of Commerce on Friday, the 2nd December 1983 at 10 A. M. at Malabar Hotel, Cochin.

Subjects like: Indo-German Industrial Collaboration; Germany — A potential market for India; Trade Fairs in Germany — Participation & Visits; German Goods for India would be covered in the Seminar.

The German Ambassador to India would take part in this Seminar in addition to the First Secretary (Economics) from the Embassy as well as the German Consul General in South India. Besides other leading figures in the industrial field such as Dr. D. C. Kothari, Chairman, M/s. Kothari (Madras) Ltd. would also be present.

Apart from the lectures, there would also be scope for general and individual discussions too

For more details please write to the Secretary, Cochin Chamber of Commerce & Industry, Post Box No. 503, Bristow Road, Willingdon Island, Cochin - 682 003. Tel: 6348/6349.

Industry Snippets

Automatic Springkler

An improved automatic sprinkler of the fusible-link type developed and patented by three scientists of the Central Building Research Institute, Roorkee, offers many additional features over existing types. Major advantages include quicker response, response at 70°C. replaceable nozzle which avoids whole-body replacement, wider coverage, minimum number of operating parts and simple construction.

The present glass bulb-type sprinklers are slow in response under convective transfer of heat while the design of the existing fusible-link types does not permit them to provide sure operation. The bodies of these sprinklers cannot be reused because the damaged nozzle requires special machining facility.

Automatic sprinklers constitute a form of fixed fire protection device in high-rise, storage basement and industrial buildings. The sprinklers consist basically of a heat-responsive element set in a body with two-yoke arms, a nozzle and a deflector plate. They act as closures to openings in a pipe layout system charged with water under pressure and are designed to open when the temperature in the event of a fire exceeds a predetermined level. A jet of water from the nozzle after the opening of the sprinkler strikes the deflector plate and is then broken up into water spray.

Multipurpose Stopwatch

A new device for measuring time has been developed at the applied science laboratory of the Bulgarian Union for Physical Culture and Sport in the town of Rousse. It is a multipurpose electronic stopwatch. The device meets the need for precise information about tpe speed of movement of the athlete over any stretch of track at any time

The multi-purpose stopwatch gives a complete description of the running of one or more competitors in races over different stretches. It aan work with three programmes. It measores thd latent fime at the start. It records and jixes the speed and the times of the athlete at every point desired by the coach along the way; at 10, at 5 metres and even at every step. It can successfullp be used to measure the speed of the dash before a long jump, high jump and triple jump.

Besides the lamp indicator, in the stopwatch there is a printing device which registers the time and can be operated manually of tautomatically at will. The apparatus also has a memory through which the recorded time can be recalled many times in the lamp indicator both before and after they are printed.

Ultrasonic System For Underwater Inspection

The inspection of vital underwater structures and pipelines can be speedily carried out using a portable ultrasonic system developed in Britain. The Subsea Ultrasonic Repeating System Mark II allows an engineer on the surface to monitor Ultrasonic testing by a diver at depths down to 300 metres.

The system consists of two modified flaw detectors connected by up to 500 metres of single coaxial transmission cable.

The results of the survey are shown to the diver on his subsea unit and are transmitted to the surface for simultaneous display to the engineer who can give expert advice, when necessary, via a communications system, to assist in the evaluation of inspection data.

The underwater equipment, which can also be operated in a dry helium environment. has a pressure sensor indicator to warn of high or low internal pressure. Another indicator gives 30 minutes notice of low battery levels.

Locating Body Infections

The department of nuclear medicine at the Royal Hobart Hospital in Tasmania has developed a new method of locating infections in the body by "labelling" white blood cells which are involved in infections and form abscesses when dead or dying.

The technique involves the production of small colloid particles (O.1 micron or less in size) from tin which are then coated with the radioactive isotope technitium. These particles are swallowed by the white cells and can be tracked back to the source of infection using a gamma-ray camera and a computer.

When a patient has an infection the white blood cell count is two to three times greater than normal.

A small amount of blood is extracted from the patient and mixed with the colloid for sufficient time to enable the white cells to swallow the particles. The blood is then reinjected into the patient and the white cell paths followed for the next 24 hours.

Energy-Saving Power Source

The General Electric Company of India has started indigenous manufacture of an energy-saving power source, primarily for metallurgical industries, which system "can save up to 20 per cent of energy costs" for user industries. The high-technology device, solid state medium frequency generator, has been developed in technical collaboration with Rabyne of U. K., of the world's leading manufacturers of solid state generators.

Diesel Substitute

The industrial Finance Corporation of Thailand and the Yuko Chemical Co. of Japan have entered into a joint venture to utilise oil from the seeds of Jatropha curcas as a diesel substitute.

Preliminary results indicate that jatroha oil compares well, even when refined by primitive methods, with diesel in stationary engine trials' with a four cylinder Yanmar diesel engine. During continuous trials, fuel consumption with jatropha and diesel oils were about equal, although during maximum speed trials, more jatropha oil was consumed. Exhaust gas temperatures were consistently higher with jatropha oil than with diesel oil.

The jatropha plant grows wild in many tropical regions. The oil content of the seed varies from 40 to 50 per cent with most of the oil located in the Kernel.

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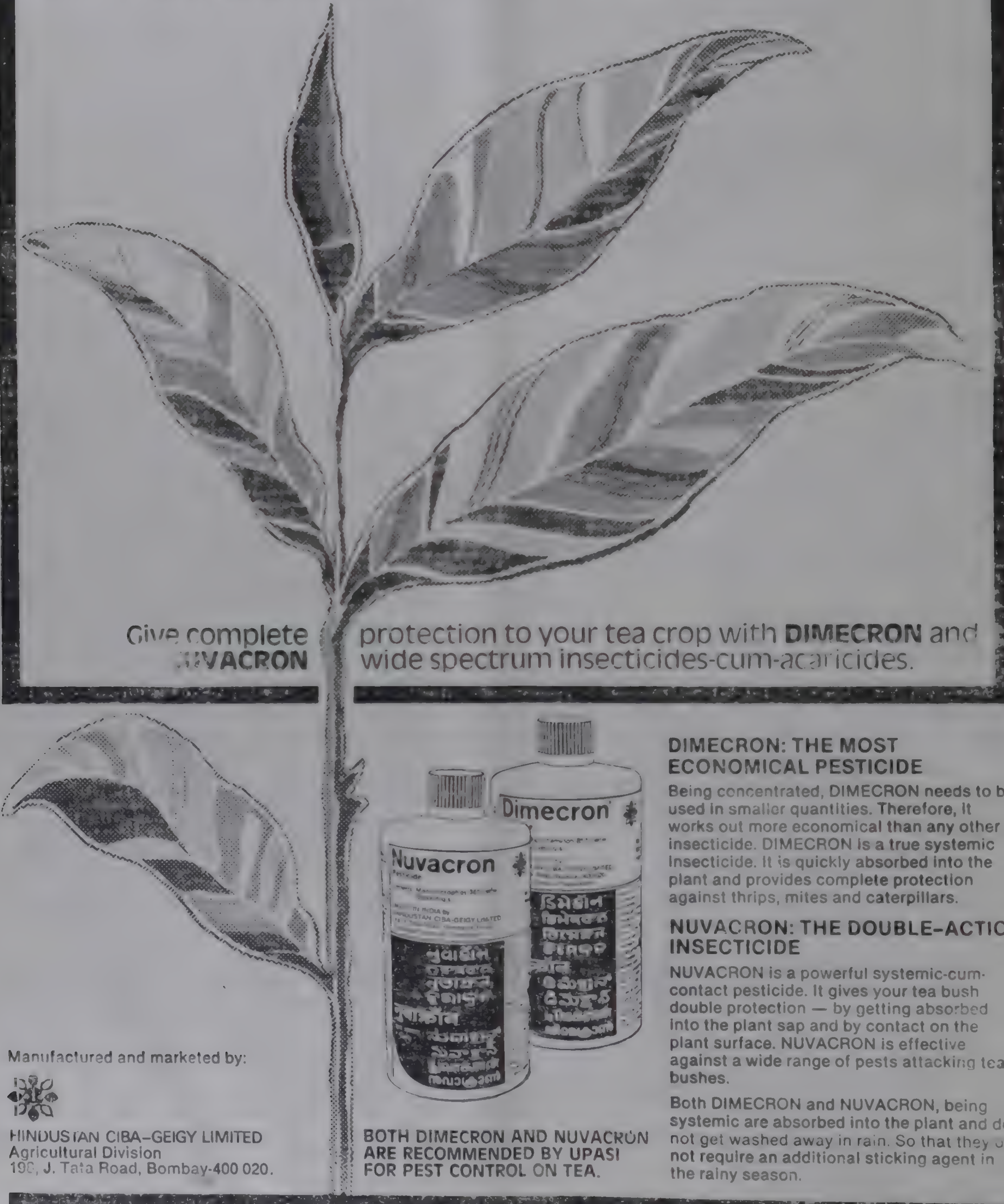

Give complete protection to your tea crop with **DIMECRON** and **NUVACRON** wide spectrum insecticides-cum-acaricides.

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Being concentrated, DIMECRON needs to be used in smaller quantities. Therefore, it works out more economical than any other insecticide. DIMECRON is a true systemic insecticide. It is quickly absorbed into the plant and provides complete protection against thrips, mites and caterpillars.

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NUVACRON is a powerful systemic-cum-contact pesticide. It gives your tea bush double protection — by getting absorbed into the plant sap and by contact on the plant surface. NUVACRON is effective against a wide range of pests attacking tea bushes.

Both DIMECRON and NUVACRON, being systemic are absorbed into the plant and do not get washed away in rain. So that they do not require an additional sticking agent in the rainy season.

BOTH DIMECRON AND NUVACRON ARE RECOMMENDED BY UPASI FOR PEST CONTROL ON TEA.

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Agricultural Division
198, J. Tata Road, Bombay-400 020.

ULKA-HCGA-TND-83

STATISTICAL ABSTRACT SEPTEMBER 1983

The production season for cardamom has started. There has been failure of rain for a continuons period of about 6 to 7 months from December '82 onwards. Frequent rainfall is absolutely essential for the growth of panicles till it reaches the flowering stage. The unprecedented severe drought prevailed during the current season resulted in heavy casuality of plants as well as crop loss in many of the cardamom plantations in Kerala, Karnataka and Tamilnadu. On a rough assessment of the field position before the beginning of the harvest it was estimated that there would be around 30 to 35% fall in production during 1983-84 season compared to the previous year's production. However the late South West monsoon showers contributed to an improvement in the situation than that was anticipated earlier. On the basis of the latest field sample study conducted it is estimated that the overall crop loss will be to the extent of 24% only.

Auction Sales and Prices

The State-wise auction sales and prices of small cardamom during the current season and the previous season are given in Table A.

It may be seen from Table A that auction sales during September '83 has recorded a decrease of 115 M. T. compared to September '82, while the average auction price showed an increase of Rs. 116 per kg during September '83. The cumulative auction sales during August-September '83 also recorded a decrease of 116 M.T. compared to August-September '82 while average auction price has shown an increase of Rs.117 per kg during August-September '83. The main reason for this decline in auction sales is due to the fall in production on account of severe drought prevailed and the poor arrivals at auction mainly in the centres of Kerala and Karnataka.

Export

Month-wise provisional figures of cardamom exported during 1983-84 received from the Customs Authorities on the basis of shipping bills passed compared to previous year's actual export figures compiled on the basis of date of shipment effected by the exporters are given in Table B.

It may be seen from the Table B that export has decreased by 42% in quantity during 1983-84 compared to 1982-83. But a rise in Unit value to the tune of Rs. 37.09 per kg has been recorded during April-September '83 compared to the same period of previous year. Due to the delayed crop situation during the current season export of fresh crops has not been possible during Sept. '83.

TABEE B

Month	1983-84 Qty (Kgs)	Value (Rs)	U. Value (Rs/kg)	1982-83 Qty (Kgs)	Value (Rs)	U. Value (Rs/kg)
April	112646	20277443	180.01	26800	3347404	124.91
May	13915	2586853	185.90	89860	13636396	151.75
June	14550	2190061	150.52	20950	2802955	133.79
July	500	173560	347.12	36593	5308539	145.07
August	6500	1055028	162.31	73745	9497004	128.78
Sept.	7426	1701629	229.14	20180	3704033	183.55
Total	155537	27984574	179.92	268128	38296331	142.83

TABLE A

State	Sept '83		Sept'82		August-Sept '83		August-Sept '82	
	Qty (M.T)	Av. price (Rs/kg)	Qty (M.T)	Av. price (Rs/kg)	Qty (M.T)	Av. price (Rs/kg)	Qty (M.T)	Av. price (Rs/kg)
Kerala	40	255.82	120	143 44	40	255.82	120	143.44
Tamilnadu	3	251.06	7	136.35	5	250.71	9	138.51
Karnataka	16	266.74	47	141.58	24	267.58	56	142.50
Total	59	258.63	174	142.67	69	259.51	185	142.92

ERRATTA

"Quantity in M. T." may be read as 'Quantity in kgs' in the Table B under Satistical Abstract appeared in our Cardamom October 83 issue.

AUCTION SALES & PRICES

Centre	September '83			September '82			August—September 1983			August—September 1982		
		Prices (Rs/kg)			Prices (Rs/kg)			Prices (Rs/kg)			Prices (Rs/kg)	
	Qty. Sold (kgs)	Max.	Average	Qty. Sold (kgs)	Max.	Average	Qty. Sold (kgs)	Max.	Average	Qty. Sold (kgs)	Max.	Average
KERALA												
Vandanmettu	12003	334.00	264.35	66532	195.10	143.60	12003	334.00	264.35	66532	195.10	143 60
Santhanpara	21006	290.90	257.63	51254	172 10	143.22	21006	290.90	257.63	51254	172.10	143.22
Kumily	6921	325.00	235.53	—	—	—	6921	325.00	235.53	—	—	—
Cochin	—	—	—	—	—	—	—	—	—	—	—	—
Kallar	—	—	—	2289	159.00	143.88	—	—	—	2289	159.00	143.88
Total (Kerala)	39930	334.00	255 82	120075	195.10	143.44	39930	334.00	255.82	120075	195.10	143.44
TAMILNADU												
Pattiveeranpatti	1384	305.00	251.39	5670	167.20	138.63	3723	305.00	250.69	7693	171.10	140.50
Bodinayakanur	1545	269.00	250 77	1096	149.00	124.54	1545	269 00	250.77	1096	149.00	124.54
Total (TAMILNADU)	2929	305.00	251.06	6766	167.20	136.35	5268	305.00	250.71	8789	171.10	138.51
KARNATAKA												
Madikeri	34	306.00	269 45	1487	147.00	139.35	34	306.00	269·45	1558	147.00	138.59
Saklespur	16465	342.00	266.92	42551	214.00	141.98	23846	342.00	267.80	51914	214.00	142.94
Mangalore	—	—	—	592	138.00	128.61	—	—	—	592	138.00	128.61
Sirsi	64	289.99	231.71	1841	210 90	139.61	98	289.99	231.00	1958	210.90	139.43
Siddapur	—	—	—	227	151.19	131.55	17	275.79	209.01	227	151.19	131.55
Kanpur	21	271.29	227.73	158	155.99	140 69	21	271.29	227.73	158	155 99	140.69
Total (Karnataka)	16584	342.00	266.74	46856	214 00	141.58	24016	342.00	267.58	56407	214.00	142.50
GRAND TOTAL(INDIA)	59443	342.00	258.63	173697	214.00	142.67	69214	342.00	259.51	185271	214.00	142.92

Source: Reports received from the licenced cardamom auctioneers.

Cultivation Operations

MONTH **DECEMBER**	South-West Monsoon areas (Kerala-Tamilnadu)	North-East Monsoon areas (Tamilnadu)	South-West Monsoon areas (Karnataka)
Primary Nursery	Third round digging. Formation of beds. Collection and preparation of seed from selected plants. Sowing seeds in rows in the beds and spreading a thin layer of soil above. Mulching with potha grass, straw or other suitable material. Watering daily.	Weeding the freshly formed beds. Collection of pandal materials. Uprooting of seedlings for transplanting to secondary beds continued.	Routine watering and prophylactic plant protection measures. Weeding.
Secondary Nursery	Routine watering and plant protection. Second round re-layering of beds and earthing up after North East Monsoon rains.	Uprooting of left over secondary seedlings for gap filling in field continued. Transplanting of primary seedlings to newly formed secondary beds and mulching continued. Watering.	Routine watering, plant protection and weeding.
Starting of New Plantations	No work.	Gap filling continued. 2nd round weeding. Weeding and mulching of last year's new planted areas.	Routine maintenance.
Maintenance of Plantations	Fourth round harvest. Thrips control. Third round weeding.	Fourth round harvest. Thrips control.	Crop harvest, curing, storage or transport to market Watch and ward.

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"World Trade Centre". Mahatma Gandhi Road,
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For thrips control without disturbing honey-bees, without affecting pollination. Applied to the soil - if you please, along with fertilisers - FURADAN enters the plant system through roots and gives from within effective and complete protection from thrips, aphids, stem and capsule borers, white flies etc. Systemic FURADAN rapidly moves into growing parts and protects new shoots and panicles from thrips attack.

Soil application of FURADAN also gives protection from nematodes, root grubs and other soil insects.

Not washed away in the rain, no drift loss. Protection for longer period. Application takes less time. Quick coverage.

Dosage: 40 grams per clump (apply when there is moisture)

ROGOR 30E

Dual action ROGOR - systemic and contact - enters the plant system within a few hours after spraying and gives protection from within. Contact action makes it very effective and versatile. Most economically priced. ROGOR for long range economical control of pests like thrips, aphids, stem and capsule borers and white flies.

Dosage: 250 - 400ml per acre (2 ml in 1 litre of water)

PARATAF (50 EC and 2D)

And the traditional METHYL PARATHION - the powerful contact insecticide for quick knock-down, in two formulations 50 EC for spraying and 2D for dusting. (Dusting during summer months).

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Fertilisers & Pesticides Dvn 6A Cunningham Road
BANGALORE - 560 052

164, Linghichetty St MADRAS - 600 001

Bristow Road, Willingdon Island, COCHIN - 682 003

Cardamom:
Nursery and its maintenance

Cardamom can be propagated by rhizome as well as by seeds. Since vegetative propagation has its own disadvantages, raising seedlings through seeds is widely practiced.

Selection of sites for nurseries:

Site should be located at an elevation of 600 to 1200 metres about M. S. L. with humus rich loamy forest soil. The site should be with a gentle slope to facilitate easy drainage. Areas exposed to high winds are also not good for raising nurseries. As far as possible the nursery site should be located nearer to the estates in which the seedlings are expected to be planted. So that the damages due to transportations can be minimised. Site should be nearer to perennial water source to facilitate easy and reqular watering.

All the vegetative growth, stumps, roots, stones, etc. should be removed from the site and soil worked to a depth of about 30 to 45 cms. to a fine tilth before convenient beds are formed.

Seed selection:

Fully ripe seeds should be collected for sowing from high yielding disease free plants of the age group of 5 to 10 years. Collected seeds should be dehusked and washed in cold water 4 or 5 times to remove the mucilage from the seeds. Then the seeds should be mixed with equal quantity of wood ash and should be dried under shade for 2 to 3 days. Now the seeds are ready for sowing. To ensure better and early germination, seeds should be sown immediately after extraction.

Sowing season:

The ideal sowing season is dry months. In Kerala and Tamilnadu, seeds are sown during November-December and in Karnataka during September-October.

However, for the seedlings to be transplanted to the polythene bags a higher seed rate is to be adoped as the germination time allowed in the primary nursery is shorter. Normally beds of size 3 ft. width and of convenient length raised to 25 cms. should be used for sowing.

In Kerala and Tamilnadu 18 months old and in Karnataka 10 months old seedlings are generally used for transplantation to the main field. Seedlings raised in polythene bags can also be planted in the main field when they are 8 to 10 months old.

Germination Beds:

A fine layer of humus rich forest soil has to be spread over it to a thickness of about 1 cm. Seed can be sown either by broadcasting or by line sowing with a seed rate of 10 gms. per sq. metre in Kerala and Tamilnadu. In Karnataka 2 gms. per sq. metre is the seed rate. The seeds after sowing should be covered with a thin layer of forests soil and then mulched to a thickness of two cms. with pothagrass, paddy straw or similar materials. Regular irrigation is given in the morning and evening. Germination in normal case will start within 30 days and continue up to 2 to 3 months. When the germination is noticed, shade pandals are errected and much removed from the beds.

Regular irrigation, weeding and application of plant protection, chemicals etc., are to be attended to the primary nursery properly. About 1000 primaryseedlings per bed can be expected in Kerala and Tamilnadu and 200 seedlings per bed in Karnataka region.

To raise the seedlings in the polythene bags a clean site is to be selected and should be provided with artificial shade. Polythene bags of 20x20 cm. size with a thickness of 200 guage are

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to be filled with a mixture of humus rich forest sail and cowdung. The bags are to be perforated to provide easy drainage of the excess water. In these bags the transplanting should be taken up on month after germination.

Advantages of polythene bags nursery:

1. Large number of seedlings can be grown in a unit area compared to the traditional nursery technique.
2. Loss of seedlings during transplantation from the secondary nursery to the main-field can be avoided.
3. The plant transplanted through this method, yields earlier as there is minimum shock during transplanting and easy establishment in the main field.

Control of pests and diseases in Cardamom Nursery:

A number of pests and diseases are known to cause damage to the cardamom seedlings in the nursery.

PESTS

I. Rhizome weevil (Prodioctes haematicus:)

The grubs of this weevil tunnel into the rhizome and cause extensive damage. The adult is a brown weevil which lay eggs in punctures made by it on the exposed portion of the rhizome. The pest becomes a serious menace in secondary nursery during November-January. The pest becomes a problem in nurseries where the same site has been sued for a number of years.

Control:

Destruction of infected rhizomes with immature stages of the pest and drenching the base of clumps with 0.1% BHC or 0.1% Chlordane or aldrin will keep the pest under check. Only healthy rhizomes collected from non infested areas should be used for replanting. Avoid transportation of plant material from affected gardens.

2. Shoot borer Djchocrocis punctiferalis:

The pest attacks seedlings of both primary and secondary nursery beds. The carterpillar bores into the central core of the tiller causing the death of the central spindle and the characteristic 'dead heart' symptom is developed. Pest population is found maximum during December and January.

Control:

The pest can be effectively controlled by dusting with 10% BHC or spraying Monocrotophos (Nuvacron) at 0.05% strength during December-January.

3. Mite:

Mite attack is noticed in nurseries during November-April. It may be controlled by spraying Dicofol (Kelthane) at the rate of 1.5 ml. per bed after diluting to 1 litre at monthly intervals. Application of wettable sulphur at the rate of 500 gms. per acre is also an effective control measure.

4. Nematodes:

Root knot nematodes are found both in primary and secondary nurseries. The effected plants exhibit the following symptoms.

a) Heavy galling and nodulation on roots.
b) Excessive branching of roots (Witch's) broom type)
c) Stunting and poor growth.
d) Yellowing and drying of leaf tips and margins.
e) Poor establishment after transplanting in secondary nursery and field.
f) Curling of newly emerging leaves ofter transplantation.

Control:

1) Change the nursery site for every 2-3 years and avoid introducing infested seedlings 2) Fumigation with Methyl bromide @ 500 g/100 sq. ft. under polythene cover for 2-3 days. This treatment also checks weed infestation in nurseries 3) When methyl bromide fumigation is not possible, treat primary nursery beds with Aldicarb/ Carbofuron at a dose of 30g/100 g per 6x1M bed after 10 days of germination along the rows and repeat after 3 months. In secondary nurseries Aldicarb carbofuron should be apylied at a dosage of 60 g/200 g per 6x1 M bed after the transplanting around the individual plants and repeated after every three months.

Cardamom:
Queen of spices, continuously being attacked by various pests.

The major enemies of Cardamom are:

- —THRIPS
- —APHIDS
- —FRUIT BORER
- —WHITE FLIES

For the efficient control of these pests use

Folidol Dust
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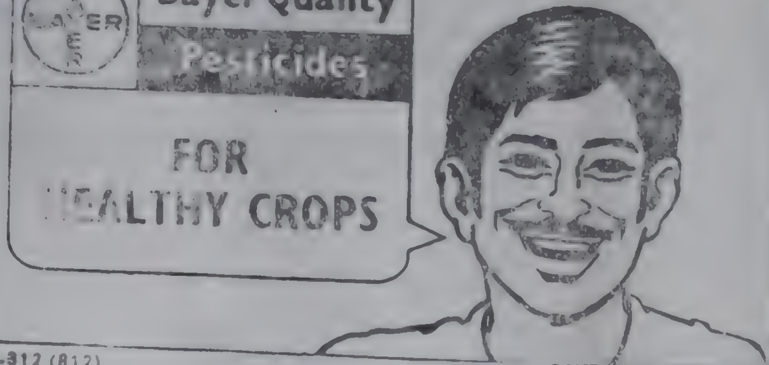
Pesticides



15-312 (812)

DISEASES

I. Nursery leaf spot:

The disease is caused by fungus *Phyllostica elettariae*. It is the most destructive and a great handicap in successful raising of the seedlings especially in Karnataka. The disease is noticed in February–April with the receipt of the first summer showers and becomes more serious during monsoon period from June–August.

Symptoms:

The disease commences as minute water soaked spots on the under surface of the leaf and later turn into a necrotic spots surrounded with water soaked area. If the wet weather prevails, these spots gradually enlarge and result in blightening or rotting of the entire leaf. During dry period spots remain more or less circular in shape, greyish in colour with numerous black sumken pycnidia in the centre. If the infection is severe, death of seedlings is seen in the primary nursery. Only young leaves are prone to infection and the seedlings develop tolerance/ resistance as they grow old.

Control:

Spray the seedlings with 1% Bordeaux mixture, or Captafol (Difolaton) 0.2% or Bavistin 0.1%. First spray is to be applied in March-April depending on summer showers and subsequent sprays at 15 days intervals. While spraying, care may be taken to cover both surfaces of the young leaves. Fungicidal spray alone may not possible to control his disease. ¡Hence, the following measures are to be adopted. 1) Take up early sowing of seeds in August–September to get sufficient growth before the onset of monsoon so that the seedlings develop tolerance. 2) Avoid direct sunlight from top or sides. Use coir mat or coconut fronds (Thetti) to provide uniform shade. If jungle leaves are used, have a slant pandal to avoid dripping. 3) Do not raise nursery continuously in the same site since pathogen accumulates in the soil 4) Raise nursery in well fertile soil and encourage good growth by periodical application of manures.

2. Damping off and Rhizome rot:

The disease appears usually in the nursery during monsoon when there is excessive soil moisture due to lack of proper drainage. The fungi *pythium* sp. and *Rhizoctonia solani* are often associated with the diseased rhizomes.

Symptoms

Initial symptoms are noticed on leaves which show slight paleness and yellowing at the tip. Gradually it spreads in to leaf sheaths followed by withering of seedlings. In primary nursery infected seedlings eventually collapse at collar region and die in patches. In grown up seedlings rotting extends from the collar region to the rhizomes which first become discoloured and gradually decay forming a watery mass of putrefying tissue-

Control:

1) Treatment of beds with formaldehyde (1:50) solution at the rate of 15 litres/1 sq. M. 2. Provision of good drainage. 3. Avoiding over population by thin sowing 4. Removel of affected seedlings along with rhizomes 5) Spraying and drenching with 1% Bordeaux mixture during monsoon.

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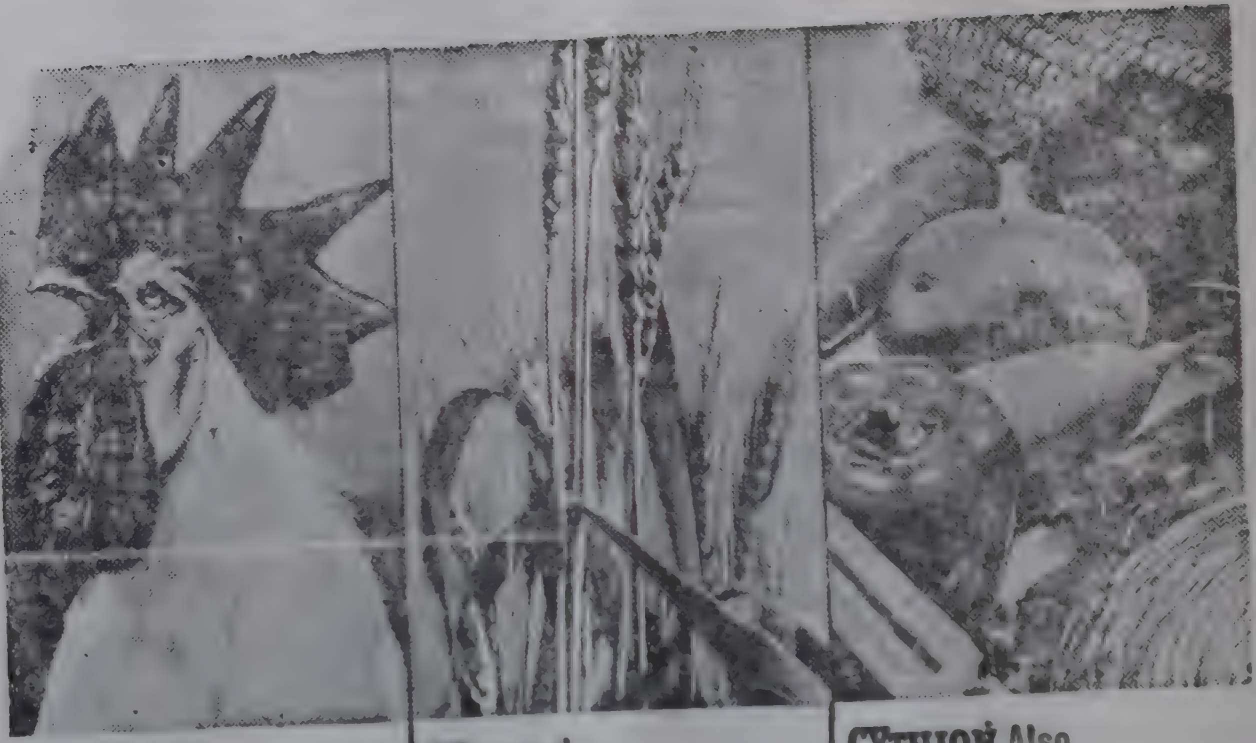

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A low hazard, powerful insecticide **Cythion** kills on contact. Prevents untold damage being done to your crops.

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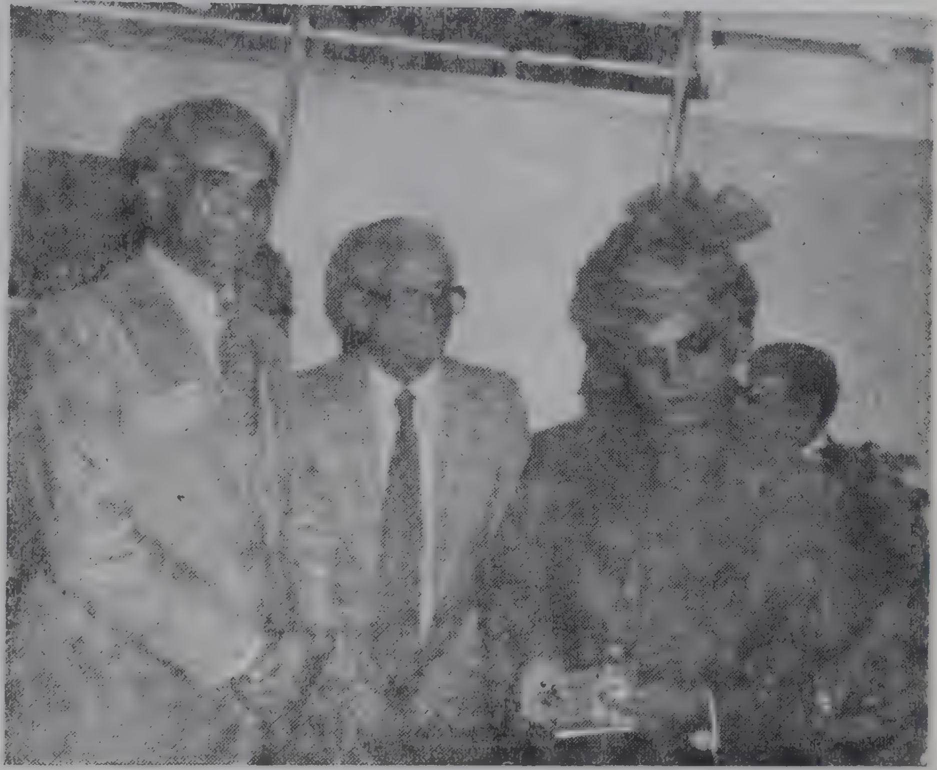
CIL-374

Fairs and Exhibitions

Cardamom Board Participates in the Anuga '83 Fair

Cardamom Board took part in the Anuga '83 International Food fair held at Cologne, West Germany recently. Nearly 5,000 firms from about 75 countries participated in the Fair. The India pavilion in the Fair was organised by Trade Fair Authority of India in co-operation with the Consulate General of India, Frankfurt. There were 15 participants from India both from the public as well as private sectors. The Board's pavilion was decorated in an attractive manner with the photo panels and copy panels. Various grades of cardamom and products of cardamom, cardamom plants etc. were displayed. Cardamom toffees, cardamom biscuits and sample packets of cardamom were distributed to the visitors.



Sri Rao Birendra Sing (right), Minister for Agriculture, Government of India visited Cardamom Board stall at the Indian pavilion in the ANUGA Fair at Cologne. He is seen here along with Shri Sreenivasan (middle), Secretary, Processed Foods Export Promotion Council and Shri Kantilal N. Dalal, Exporter and Cardamom Board Member.

In the cooking demonstration of marine products-jointly sponsored by the MPEDA and SEPC, Cardamom was used as an ingredient in the preparations of

Shri Balakrishnan, Consul General. Indian Embassy, Frankfurt and Mrs. Balakrishnan visited Board's stall in the ANUGA Fair. They are flanked (on the right) by Mr. Kantilal N. Dalal Exporter and Board Member and Shri K. P. Somasekharan, Superintendent (Accounts), representative of the Board at the Fair.

Thrips reduce your crop by 25% lower your price by 25% or more

Rallis 'Super–Power' Products eradicate thrips

FURADAN-3G

For thrips control without disturbing honey-bees, without affecting pollination. Applied to the soil - if you please, along with fertilisers - FURADAN enters the plant system through roots and gives from within effective and complete protection from thrips, aphids, stem and capsule borers, white flies etc. Systemic FURADAN rapidly moves into growing parts and protects new shoots and panicles from thrips attack.

Soil application of FURADAN also gives protection from nematodes, root grubs and other soil insects.

Not washed away in the rain, no drift loss. Protection for longer period. Application takes less time. Quick coverage.

Dosage: 40 grams per clump (apply when there is moisture).

ROGOR 30E

Dual action ROGOR - systemic and contact - enters the plant system within a few hours after spraying and gives protection from within. Contact action makes it very effective and versatile. Most economically priced. ROGOR for long range economical control of pests like thrips, aphids, stem and capsule borers and white flies.

Dosage 250 - 400ml per acre (2 ml in 1 litre of water)

PARATAF (50 EC and 2D)

And the traditional METHYL PARATHION - the powerful contact insecticide for quick knock-down, in two formulations 50 EC for spraying and 2D for dusting. (Dusting during summer months).

For details:

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Bristow Road Willingdon Island, COCHIN - 682 003

curries, and pulav. Many of the visitors showed good response to the cardamom flavoured preparations.

On the inaugural day, the Union Minister for Agriculture, Shri Rao Birendra Singh visited India pavilion including Cardamom Board stall and had brief discussions on the items exhibited. Other distinguished visitors to the Indian stall included. Dr. Otto Graf Lambs dorff Rle's Minister for Economics Mr.M.Ignaz Kiebhle, Minister for Agriculture; Mayor of Cologne

(Continued on page 12)

Shri Chakravarthy, (left) Consul General, Indian Consulate, Bonn and Shri Ravi Varma (middle), Director, Trade Fair Authority of India, India Pavilion, ANUGA Fair are being received by Shri Somasekharan, Cardamom Board representative at the Board's pavilion.

Middle East Food & Equipment Trade Fair

The 3rd Middle East & Equipment International Trade Fair sponsored by Bahrain Ministry of Commerce & Agriculture will be held from 26th February to 1st March 1984 at the Exhibition Centre, Bahrain. Items such as spices, meat, juices, beverages, tea, coffee, fish etc. will be covered at this Fair. The Fair is organised by the Arabian Exhibition Management. The space rent is U. S. $ 238 per sq. metre.

For further details, please contact:

WORLDWIDE,
Stephen Luff,
Project Manager,
Overseas Exhibition Services,
11, Manchester Square
London WIM 5AB,
UNITED KINGDOM.
Telex: 24591-MONTEX-G
Tel : 01-486-1951
(OR)
Resident Representative
P. O. Box 3565,
NEW DELHI-110 024
(Tele: 623311)

Mr. Eric Consalves (right), Indian Ambassador to EEC Countries is seen at the Cardamom Board stall along with Mr. Kantilal N. Dalai (middle) and Shri Somasekharan (left).

(Continued from page 11)

and Mr. S. Lengl, Secretary of State; Ministry of Economic Co-operation, FRG. A team of FRG Parliamentarians also visited the India pavilion

Mr. Eric Gonsalves, Indian Ambassador to E E C. also visited India pavilion including Board's stall and had detailed discussions with the representatives of various organisations whose commodities were exhibited.

Mr. Ravi Varma, Director of the pavilion-TFAI, Shri K P. Balakrishnan, Consul General, Frankfurt; Ms. Edalji, Manager (Marketing), Indian Consulate, Frankfurt and other officials of the Consulate at Frankfurt extended all kinds of help and advice to the participating organisations.

Mr. Kantilal N. Dalal, the Board Member; Shri G. N. Dalal cardamom exporter and Mr. J. M. Gandhi, exporter and a former board member were also present in the Cardamom Board's stall during the six days of the Fair.

Mr. K. P., Somasekharan Superintendent (Accounts) represented the Board at the Fair.

Mr. N. Bharathan Pillai (left), Deputy Director (Marketing) and Mr. K. P. Somasekharan, Superintendent (Accounts) along with the guide at the Board's pavilion in the ANUGA International Fair held at Cologne.

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- Indian spices enjoy a very good reputation and a world market that is expanding every day.

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"World Trade Centre". Mahatma Gandhi Road,
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(It pays to grow and export all items of spices)

News Shorts

Cardamom Curing house inaugurated

A cardamom curing house constructed by the Nettithozhu Unit of Malanadu Development Society under the financial aid of Cardamom Board ann Indo-German Social Services Society was inaugurated by Shri K. Mohanachandran, IAS, Chairman, Cardamom Board at Nettithozhy recently. Shri M. Ginadevan, M. L. A., Udumbanchola presided over the function.

In his inaugural speech, Shri Mohanachandran pointed out that the financial aid given by Cardamom Board to Malanadu Development Society for constructing a cardamom curing house is the first one of its kind, and it was mainly done to benefit the small growers who are not having their own curing house. He also added that it is part of tho Board's effort to encourage and promote co-operative awareness among the small growers in order to produce and dry maximum cardamom both qualitatively and quantitatively.

The Chairman congratulated the authorities and members of Malanadu Development Society for their remarkable achievement by constructing the curing house. Meanwhile, he urged the need for utilizing this convenience by all the small growers of the area. The curing house has a capacity of drying 1000 kgs. of cardamom everyday.

Shri Ginadevan, M.L.A. in his presidential address advised the growers to utilize the maximnm possible natural resources of the area to improve the living conditions and financial status of the people as well as the prosperity of the State.

Shri K. G. George Karimattom Cardamom Board Member and President of Vandanmettu Panchayat explained the different schemes of the Board to improve the existing cardamom plantions as well as to rejuvenate those plantations affected by severe drought during the last year.

Shri R. Somasekharan pillai, Field Officer, Cardamom Board, Vandanmettu while thanking the authorities of the Malanadu Development Society, Nettithozhu Unit, also highlighted the polybag nursery scheme, plant protection equipment scheme and advised the growers to obtain the maximum benefit of these schemes.

Fr. Joseph Cheruvil welcomed the gathering and Fr. Mathew Vadakkenuryil, Secretary of Malanadu Development Society Kanjirappally proposed vote of thanks.

New Commerce Ministry Representative in the Cardamom Board

Central Government has appointed Sri U. P. Singh, Director, Ministry of Commerce, as a member of the Cardamom Board, vice Sri Pawan Chopra, Director, Ministry of Commerce.

Import Regulations in Yemen Arab Republic

It is understood from the the Embassy of India, Sanaa that with the deteriorating economic situation in Yemen Arab Republic (reserves now cover only 3 months imports as against 16 months at the the beginning of the year; balance of payments deficit in the first quarter was $ 122.7 million as compared to 345.2 million for the whole of 1982 and the situation has steadily worsened) a series of austerity measures have been introduced. These are:

(a) No Yemeni may take out of the country more than 100,000 Rials per year;

(b) Dollar drafts exceeding $ 1000 may not be issued without the prior permission of the Central Bank;

(c) A variety of restrictive measures have been introduced which restrict ablity to obtain foreign exchange in cash or drafts and in opening L/Cs;

(d) Commercial banks have been asked to cease trading in Yemeni Rials at free market rates;

(e) Money changers may not export Yemeni Rials without authorisation;

(f) The import of a number of items has been temporarily banned to conserve foreign exchange;

(g) The cost of tender documents for foreigncompanies has been dramatically increased.

Compulsory use of French Language In All Documents For Exports To France

For quite sometime French language is to be used compulsorily in all export documents relating to export to France. Having regard to the fact that such' regulation' may cause difficulties to the Indian exporters exporting to France, Government of India took up the matter with the French Governments so that relaxation in respect of goods exported from India might be secured. However, since this 'regulation' is already in the French statute book and has been applied universally in respect of all countries, no such relaxation has been possible to secure so far.

Cyprus Directory 1982

The Cyprus Chamber of Commerce and Industry are pleased to announce the publication of their 1982 Directory (4th edition). This edition contains up-to-date information concerning ,the Island's economy, industry, tourism, trading and other economic activities. In addition, to the above, a section gives ample information with regard to tax incentives for new industries, etc. This edition includes exporters and what they export, industrialists with their products and a list of importers and details each firm imports.

The Directory having 530 pages, hard cover & priced at $ 25 (including air mail postage) is available at the Cyprus Chamber of Commerce and Industry, P. O. Box 1455, Nicosia, Cyprus. (Tel 021/62312, 021/49500, Telex: 2077 CHAMBER CY).

Prodec - Import (Finland)

Produce-Import, the Finnish Import Promotion Office for Products from Developing Countries, was started in PRODEC late in 1980.

The primary aim of the office is to offer the following services to exporters from developing countries:-general information about the Finnish market-information upon request on the sales prospects for products from developing countries in Finland-acting as intermediary in establishing business contacts between exporters from developing countries and Finnish importers and agencies. The services of Prodec-Import are free of charge.

For further details, please contact: Prodec, The Helsinki School of Economics, Lapuankatu 4, SF - 00100 Helsinki 10, Finland.

Tel: 409 315, 440 211
Telex: 124500 prod sf
Cables : PRODEC Helsinki

Director of Cardamom Development

Shri Antony Cherian, Deputy Director (Development) has taken over the additional charge of Director of Cardamom Development

CCS Procedure

For the information of exporters, the Trade Notice No.22/83 dated 2-12-1983 received from the Joint Chief Controller of Imports&Exports, Ministry of Commerce, Madras 17 is reproduced below:

> "Attention of the trade is is invited to column 3 (c) of the application meant for claiming CCS under SPS and column 8 (e) in the application meant for CCS under normal procedure. sub-items (c) and (e) referred to above may be further divided into (i)&(ii) against which amount of CCS claimed should be indicated both in figures and in words respectively.
>
> Wherever the above information is not furnished in full, such applications will be rejected".

Regional Research Station, Saklespur

Shri C. Kunhikrishnan Nair, Junior Soil Chemist at Indian Cardamom Research Institute, Myladumpara is posted as Scientist-in-charge of the ICRI Regional Research Station, Saklespur (Karnataka).

Industry Snippets

Low Cost Millet Based Beverage

A low cost beverage from malted millets has been developed by CFTRI. The product dissolves easily in milk.

The millets used for making the beverage are: *Paspalum miliaceum* or common millet (*Cheena)*, *Echinochloa frumentacea (Samwa)*, *Panicum sumatrense* or little millet *Shavan, Setaria italica* or Italican foxtail millet (*Kangani*), *Paspalum scrobiculatum* or Kodo millet (*Kodra*), *Eleusine coracana* or finger/African millet *(Maduva)*.

The manufacturing process consists of preparing a syrup using millet and barley malt in equal proportion. Milk powder, cocoa powder and essence are added to the syrup which is then homogenized and dried in vacuum shelf drier.

The product is expected to cost about Rs. 28/- per kilogram which is much lower than the market price of commonly available food beverages.

Steel Thinner Than a Newspaper page

A new kind of steel foil which is only 30 microns thick or less than one third thickness of a normal newspaper page has been developed by Nippon Kokan Company Ltd. one of the Japan's steel producers (one micron is equal to one thousandth of a millimetre). The new steel foil is stated to be harder, stronger and cheaper than aluminium foil.

Techniques to reduce bacterial counts in Spices:

Jydsk Teknologisk Institute, 135 Marselis. Boulevard DK-8000 Aarhus, Denmark has developed a technique to reduce the bacterial load in spices such an pepper and paprika. The bacterial load of about 50 million in pepper has been reduced below 1000 per gramme by extruder cooking process. The extruder degerminate black pepper has been organoleptically tested by the expert panel and could not find any significant difference between the raw and degerminated sample. The extrusion cooking machine in the capacity of 40Kg/ hour costs 1 million Dkr. (about Rs. 10 lakhs).

How to handle mango and pineapple for export:

Mangoes are dipped in water-bath at a temperature of 55 degree centigrade for five minutes. This is considered better than applying fungicide and protect against mould disease which could otherwise make the fruit inedible during transport under refrigeration. This is followed in South Africa. If the air temperature goes above 32 degree centigrade "sunburn" develops in pineapple which results in a break down of the cellular structure of the fruit. The suitable temperature is about 18-20 degree centigrades.

Monthly Statistical Abstract - October 1983

AUCTION SALES & PRICES OF CARDAMOM

The State-wise auction sales & prices of cardamom (small) during the current season and the previous season are given in Table A.

Table A

State	Oct. '83 Qty (M.T)	Oct. '83 Av. price (Rs/kg)	Oct '82 Qty (M.T)	Oct '82 v. price (Rs kg)	August-Oct. '83 Qty (M.T)	August-Oct. '83 Av price (Rs kg)	August- Oct.'82 Qty (M,T)	August- Oct.'82 Av. price (Rs/kg)
Kerala	183	312.83	286	144.78	223	302 63	407	144 38
Tamilnadu	7	273.40	13	130.95	2	263.47	22	133 97
Karnataka	39	303.24	111	139.75	63	289.59	167	140.68
Total	229	310 04	410	142 98	298	298 31	596	142 96

It may be seen from the above table that auction sales during October '83 has decreased by 181 M. T. compared to October '82, while the average auction price increased by Rs 167 per kg. The cumulative auction sales during August-October '83 recorded a decrease of 298 M.T compared to August-October'82 while the average auction price was higher by Rs. 155/-per kg during August - October '83 compared to the same period of last year.

Export

The month-wise provisional figures of cardamom exported during 1683-84 received from the Customs Authorities on the basis of the shipping bills passed compared to previous year's actual export figures compiled on the basis of date of shipment effected by the exporters are given below:-

Table B

Month	1983-84 Qty (Kgs)	1983-84 Value (Rs)	1983-84 U Value (Rs/kg)	1982-83 Qty (Kgs)	1982-83 Value (Rs)	1982-83 U. Value. (Rs/kg)
April	112646	20277443	180 01	26300	3347404	124.91
May	13915	2586853	185.90	89860	13636399	151.75
June	14550	2190061	150.52	20950	2802955	133.79
July	500	173560	347.12	36593	5308539	145.07
August	6500	1055028	162.31	73745	9497004	128.78
September	7426	1701629	229 14	20180	3704033	183 55
October	12043	2383963	197.95	62825	9541877	151.88
Total	167588	30368537	181.22	330953	47838208	144.55

It may be seen from table B that export has decreased by 49% in quantity during 1983 84 compared to 1982-83. But a rise in the unit value of Rs, 37/-per kg has been recorded puring April-October '83 camdared to the same period of previous year. The main reason for this decline in export was the limited stock position in the off-season period ie. April-September '83 coupled with very high price in the domestic market which made Indian Cardamom uncompetitive in the International markets.

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AUCTION SALES AND PRICES OF CARDAMOM

Centre	October '83			October '82			August—October 1983			August—October 1982		
	Qty. Sold (kgs)	Prices (Rs/kg) Max.	Average	Qty. Sold (kgs)	Prices (Rs/kg) Max.	Average	Qty. Sold (kgs)	Prices (Rs/kg) Max.	Average	Qty. Sold (kgs)	Prices (Rs/kg) Max.	Average
KERALA												
Vandanmettu	105055	442.20	316.19	180934	180.00	145.89	117058	442.20	310.87	247466	195.10	145.27
Santhanpara	31990	388.60	297.55	66066	167.00	140.30	52996	388.60	281.73	117320	172.10	141.58
Kumily	44835	435.00	315.81	35031	165.10	148.12	51756	435.00	305.07	35031	165.10	148.12
Cochin	1464	385.00	314.10	3245	158.20	143.49	1464	385.00	314.10	3245	158.20	143.49
Kallar	—	—	—	1329	137.10	130.96	—	—	—	3618	159.00	139.13
Total (Kerala)	183344	442.20	312 83	286605	180.00	144.78	223274	442.20	302.63	406680	195.10	144.38
TAMILNADU												
Pattiveeranpatti	2831	330.00	288.04	12170	168.10	132.14	6554	330.00	266.82	19863	171.10	135.38
Bodinaykanur	3933	285.00	262.86	1024	138.00	116.81	5478	305.00	259.45	2120	149.00	120.81
Total (Tamilnadu)	6764	330.00	273.40	13194	168.10	130.95	12032	330.00	263.47	21983	171.10	133.97
KARNATAKA												
Madikeri	550	335.00	305.99	10974	149.00	132.49	584	335.00	303.86	12532	149.00	133.25
Saklespur	34776	461.20	302.66	85863	201.00	141.75	58622	461.00	288.48	137777	250.00	142.20
Mangalore	—	—	—	4130	150.00	130.98	—	—	—	4722	185 00	130.68
Sirsi	2658	368.99	307.36	6075	160.61	137.18	2756	368.99	304.64	8033	211 99	137.73
Siddapur	750	339.99	313.59	3001	150.55	128.22	767	339.99	311.27	3228	210 99	128.45
Kanpur	—	—	—	627	155.00	130.39	21	271.29	227.73	785	182.29	132.46
Total (Karnataka)	38734	371.00	303 24	110670	201 00	139.75	62750	461.00	289.59	167077	250.50	140.68
Grand (Total India)	228842	461.70	310 04	410469	201.00	142.98	298056	461.00	298.31	595740	250.50	142.96

Source : Reports received from licensed cardamom auctioneers.

OVERSEAS TRADE ENQUIRIES

Anuga Food Fair, Cologne - October 15-20, 1983

1. Asian Market,
Konrad-Adenauer-Str. 15,
D-5650 Solingen 1,
F. R. G.
Tel: (02122) 17193
All spices

2. Mr. Jagdeep Sahani,
Managing Director,
AL OTHMAM & AL BISHER
TRADING CO. W. L. L.
P. O. Box: 22984
Safat, Kuwait (A. GULF).
Tel: 832260-841093
Telex: KT 23550
Cardamom green

3. Allied Enterprises,
P. O. Box 1579,
Deira-Dubai,
U. A. E.
Tel: 225456
Telex : 45475 ALENT EM.
Cardamom green

4. M. Depuydt,
N. V. Natumix,
Maalstraat 39,
8640 Moorsele,
Belyie.
Tel : (056) 50. 27. 24
Telex : 86, 198-Natumx.
Cardamom spice and oil
oleoresine

5. Dan-Sheba Trading,
Amager Boulevard 2, St.,
DK-2300 Copenhagen S-Denmark.
Tel: 01-541952
Telex: 16600 FOTEX DK.

6. Mr. P. Van Cotthem,
Verstegen Specerijen,
Giessenweg 62,
3044 AM Rotterdam,
Tel: (010) 155100
Telex : 23008 Picol NL.

7. Paula Pohjakallio,
KY INPAC KB,
Iiluodonkuja 4,
SF-00980 HELSINKI 98,
Finland.
Tel: 3580 317377
Telex: 121248 Paula Sf.
Cardamom

8. Mr. A. Hogenaar,
Brood-Banket Bakkerij,
Konditorei-Ijssalon,
Ring 32-Haamstede,
Holland. Tel. 01115 1464-1215
Cardamom oil

9. Mr. Angel Jobal, S. A.
Princesa, 38,
Barcelona-3,
SPAIN. Tele. 319 7802319 78 05
Cardamom Bleached

10. Daarnhouwer & Co.,
Dep. Chainstores,
Asia-Haus,
49, Ost-West-Strasse,
2000 Hamburg 11
Tel. 331071
Telex: 02 162416.

11. Mr. K. V. Andersen,
E. Bieriag International Spice Trading APS,
Jndustrievely 32-36,
DK-4683 Ronnede.
Tel. 03711626
Telex: 43518
Cardamom and Cardamom Powder–Big Cardamom also

12. Hans-Dieter Rabenstein,
E. H. Worlee&Co. M. B. H.,
Bellevue 7-8,
Postfach 60 29 60,
D-2000 Hamburg 60.
Tel. 040/27 134-168
Telex: 211673 Worle d.
Cardamom Powder

13. Nordflaks AB,
Department Stores,
Box 63, 43121, Molndal.
Tel. 031-275020
Telex: 21613 NFSPICE-S.

14. Izadco Inc.,
1425 Broadway, Suite 16,
Burlingame, CA 94010

15. Black Boy,
H. CHR. Olsens Eftf. A/S,
Grundsetmoen,2400 Elverum,
Tel. (064) 12833.

16. AB Boden&Lindeberg.
Sjoviksbacken 10,
S-11743 STOCKHOLM
Tel: + 46 8-45 3853
Tel: 17704 HANSBOS.
Cardamom

17. Teas & Spices,
The Herb Farm (Canterbury) Ltd.,
Broad Oak Road, Canterbury,
Kent, England.
Tel: (0227) 52254/56811
Telex: 96118 ANZEC. G.
Cardamom-500 kgs.

18. Kiro Biscuiterie,
Le Squet,
2, Rue des Suisses,
F-06400 Cannes,
France
Tel: (93) 39. 54. 49.
Cardamom powder & oil

19. Latona S. A.,
Cite DE L,ouest 2,
CH-2006 Neuchatel,
Switzerland.
Tel. (038) 244958
Telex. 35100 TXCAB CH.

20. Allatini, S. A
32. Kifissias Str.
Paradissos,
Amaroussion,
Greece.
Tel. 68 20 750
Telex: 215538
Cardamom biscuits

21. Aziz Ahmed,
Maronik (Export Import) Ltd.,
573 Upper Richmond Road west,
Richmond, Surrey,
Great Britain.
Tel. 01. 876

22. peacock Products Ltd.,
Peacock House,
52 Rochester Raw,
London SWIP IJT.
Tel. 01-828-8388
Telex. 8956068 PEACOK G.
Cardamom-100 M. T.

23. Aspa Orient Gmbh & Co.,
Kaiser Str. 50,
6, Frankfurt.
Cardamom/Whole powder

24. K. Afhar,
Kefan Ltd. Food Suppliers,
Unit 3, Central Trading Estate,
Marine Parade.
Northam,
Southampten 50 IPJ.
Telex: 47793 KEFAN-G.

25. M. Aloudin,
Alkno, Cash and Carry,
Tropical Foods and Spices,
Rungdorfer Strasse 39,
5300 Bonn-2,
West Germany.
Tel. 0228-363112
Telex: 8869460
Cardamom in consumer packs of 1 to 5 kgs.

CULTIVATION OPERATIONS

MONTH **JANUARY**	South-West Monsoon areas (Kerala-Tamilnadu)	North-East Monsoon areas (Tamilnadu)	South-West Monsoon areas (Karnataka)
primary Nursery	Routine watering-removal of mulch if germination is noticed, followed by erection of shade pandals over the beds.	Sowing of seed in lines on the beds, spreading a thin layer of jungle soil. Mulching with potha grass and regular watering.	Regular watering and plant protection measures. Weeding. Collection of decomposed farm yard manure or jungle soil and cleaning.
Secondary Nursery	Third round weeding and mulching. Second round manuring routine watering and plant protection measures.	Watering as required. Plant protection measures.	Routine watering, plant protection. Weeding, collection of jungle soil and cleaning.
Starting of New Plantations	Third round weeding.	No work.	Mulching with dry leaves.
Maintenance of Plantations	Fifth round crop harvest. Thrips control. Providing foot paths. Third round weeding continued and completed.	Fifth round harvest Thrips control	Last round harvest completed Curing. Storage or transport to market. Watch and Ward. Mulching with dry leaves.